



Privatisation of Electricity Distribution in Orissa

A Case Study



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Abbreviation and acronyms

BSES	Bombay Suburban Electricity Supply Limited
CEA	Central Electricity Authority
CEO	Chief Executive Officer
CESCO	Central Electricity Supply Company
DFID	Department for International Development
DISTCOs	Distribution Companies
DOA	Distribution Operation Agreement
DoE	Department of Energy
DSM	Demand Side Management
DVB	Delhi Vidyut Board
E(S) Act 1948	Electricity (Supply) Act 1948
EREB	Eastern Region Electricity Board
Gol	Government of India
GoO	Government of Orissa
GRIDCO	Grid Corporation of Orissa
HRD	Human Resource Development
ICB	International Competitive Bidding
IM	Information Memorandum
NESCO	North-eastern Electricity Supply Company
ODA	Overseas Development Administration
OER Act 1995	Orissa Electricity Reform Act 1995
OERC	Orissa Electricity Regulatory Commission
OHPC	Orissa Hydro Power Corporation
OPGC	Orissa Power Generation Corporation
OSEB	Orissa State Electricity Board
PFC	Power Finance Corporation
PMGY	Prime Minister Gramina Yojna
PPAs	Power Purchase Agreements
R&M	Renovation & Moderation
REPO	Rural Electrification Planning Organization
REPU	Rural Electrification Planning Unit
RFP	Request for Proposal
RFQ	Request for Qualification
SAR	Staff Appraisal Report
SBM	Single Buyer Model
SDP	State Domestic Product
SOUTHCO	Southern Electricity Supply Company
VEC	Village Electrification Committee
VRS	Voluntary Retirement Scheme
WB	The World Bank
WESCO	Western Electricity Supply Company

1 Introduction

Since the late eighties the power supply industry in many parts of the world has been going through reforms, resulting in radical changes to its structure as well as the regulatory set-up. In India the process started in the early nineties. Orissa was the first state to initiate a comprehensive reform programme in the country. Its main components were:

- Establishment of an independent electricity regulatory commission.
- Structural unbundling of the OSEB (Orissa State Electricity Board) into separate corporations for generation, transmission, and distribution.
- Private sector participation in hydro generation and transmission.
- Privatization of thermal generation and distribution.
- A cost-related tariff regime.

Distribution privatization was a critical element of the reform programme and its success would determine whether the sector became self-sustainable. Also, this was the first time a state-owned electricity industry was being restructured in India or South Asia.

This case study reports the distribution privatization experience in Orissa starting with the context of reform right up to the process and strategy for privatization, and including the post- privatization experience. A gist of the views expressed by different committees in recent years on the outcome of the reforms and some issues of interest arising from this case study are also presented.

The context of reform

In the early nineties the Government of Orissa (GoO) was in a poor financial condition. The financial health of the state had eroded as a result of increased revenue expenditure since 1982/83. The revenue deficit in 1991/92 stood at 187.71 crore rupees against a surplus of 27.98 crore rupees in the year 1981/82 (www.orissagov.com). The state was finding it increasingly difficult to support socio-economic and infrastructure development activities. The per capita net SDP was the second lowest in the country and 48.56% of the population (compared to a national average of 35.97%) lived the below poverty line.

The development of the state's power sector which was totally owned by the government was also getting affected. The installed generating capacity in the state in 1991/92 was 1612 MW (an increase of 4.55% during the past decade) (CMIE 2002) but this was insufficient to meet the demand. The State had a peak deficit of 23.9% and an energy deficit of 7% (Planning Commission 2001). The corresponding deficits at the national level during this time were 18.8% and 7.8%.

The average plant load factor of its generating stations hovered around just 30% compared with a national average of 55.3% in 1991/92. It further declined to 29% in 1994/95 when the national average was 60%. The reported transmission and distribution losses in the state were about 25.3% (an increase of 6% compared to 1980/81) as against 22.8% losses at the national level (Planning Commission 1997).

The financial performance of the OSEB (Orissa State Electricity Board), the utility responsible for power sector development in the state (see Box 1), was on the decline. The Board was also becoming increasingly dependent on government subsidies; in fact, it was the largest recipient of subsidies amongst all public sector undertakings in the state. Despite that, it was not earning the statutory 3% return on net fixed assets. Without a subsidy the return was -87% (certainly better than the national average of -12.7%). Thus even though it depended heavily on government subsidies, the government was finding it increasingly difficult to provide them because of its poor financial conditions.

Meanwhile, the gap between average cost of supply and average tariff was also increasing. It had increased from 8 paise in 1989/90 to 18 paise in 1991/92 (World Bank 1996; OSEB Annual Reports 1990-94). This was despite the fact that agricultural consumption constituted only around 4% of the total in Orissa. Further, a large portion of the billing was being based on average consumption and load factor in the absence of metering. The OSEB was also relatively overstaffed. (Number of employees per million units of energy sold was 6.2 compared to a national average of 4.5) (Planning Commission 1999; CEA 2000; CMIE 2002).

Box 1 Structure of power supply industry in Orissa

The OSEB established by the GoO in 1961 under the provisions of the Electricity (Supply) Act 1948 was responsible for rational development of the power sector in the state. It was a statutory organization, but was to be guided by such directions on questions of policy would be given to it by the government. In case of dispute the matter was to be referred to the CEA (Central Electricity Authority). The OSEB depended entirely on state government loans so the government had considerable operational control over its functioning. This extended to matters of tariff also.

The organizational structure of the electricity supply industry differed from that in most other states. The OSEB was responsible for all transmission and distribution, but the DoE (Department of Energy) owned some hydro power generating stations. The OPGC (Orissa Power Generation Corporation) created in 1984 was responsible for constructing and operating thermal power plants in the state.

The OSEB was a member constituent of the EREB (Eastern Region Electricity Board) and its transmission system was connected to the power systems of West Bengal and Bihar. It also had radial transmission links to Andhra Pradesh and Madhya Pradesh.

In the early nineties, economic policies were getting liberalized in the country. Infrastructure reform programmes were aimed at reducing the fiscal deficit through a reduction in subsidies, technical gains to suppliers through efficiency enhancement, and gains to consumers through improvements in the quality of supply, and a reduction in the cost of services, or both (World Bank 1994). Of all these, the objective of limiting the fiscal deficit was the uppermost. Efficiency improvements were sought through commercialization, corporatization and gradual privatization of service providers. Privatization was considered necessary, as there was a general perception that improvements in public sector management were unlikely to provide adequate results (ADB, NCAER 1999). Also, over the years tariff decisions in the states had become increasingly subjected to compulsions of political populism with financial viability of SEBs not receiving due attention [9]. It was thought that consumers would benefit from tariff rationalization and improved supply and service.

Realizing these and the fact that the power supply conditions were deteriorating in other parts of the country as well, the GoI took the initiative of bringing about changes in the structure and regulatory set up. The first such step was opening up the generation business (on a standalone basis) to the private sector. However, it was soon realized that more comprehensive reforms were needed and the states should be their catalysts. GoI also strived for some national level consensus and so the reform climate in the country was tuned to structural and regulatory changes in the power supply industry.

Meanwhile, the World Bank (which was funding the power sector in many developing countries including India) became increasingly concerned about the poor performance of the utilities. It had suspended the disbursement of loans to Delhi, Uttar Pradesh, Karnataka, and Kerala and threatened suspension to some other states. The Bank was forced to review its funding policy based on this experience, with a focus on developmental process and improving the access to electricity. As a result, a new set of policies for power sector lending was formulated in 1993 by the Bank, according to which it would extend financial support to only those utilities which functioned on commercial lines or which were committed to improving the performance of the power sector through reform. These principles which would govern the World Bank's policy for involvement in the Indian power sector were formally announced in October 1993 at a conference in Jaipur. [see Box: 2].

Box 2 Guiding principles of the World Bank for funding the power sector

- Structural reforms involving dismantling of vertically integrated monolith organizations such as SEBs into separate entities dedicated to generation, transmission and distribution and the corporatisation of such entities.
- Electricity pricing to reflect the cost of supply. The subsidy to any particular group to be targeted and provided for by the government in a clear and transparent manner.
- Creation of independent regulatory body to regulate the electricity sector and to insulate tariff setting from political pressures and provide a measure of comfort to private investors.
- Induct private sector management skills and encourage private investment in the sector in the context of reduced availability of funds from governmental sources.

It was also around this time that the World Bank cancelled its loan to the DoE of GoO for the Upper Indravati hydroelectric project because of the slow progress.

In view of four factors — the poor socio-economic conditions in the state, the government's lack of finances to support power development programmes, the deteriorating performance of the power sector, and the World Bank's funding conditions of the World Bank, the GoO decided to implement comprehensive reforms. In November 1993 the Chief Minister of Orissa confirmed the government's commitment to implement a comprehensive reform package. The reforms programme was also reviewed and approved by the Council of Ministers in April 1994. The key drivers of this reform programme were:

The government expected that the reforms programme would enable Orissa to establish and develop a viable power industry and reduce its budgetary burden. The OSEB expected that this would cause a turnaround for the sector, but would not adversely affect career prospects, consumer expectation related to better quality of supply and service. The industrial consumers expected a more rationalized tariff structure and a reduction in the burden of their cross subsidy. The potential investors expected a more level playing field with the regulator in position. The government entered into a formal agreement with the World Bank in September 1994 to implement a reform programme as envisaged above. The GoI also supported their reforms.

3 Preparatory work for reform implementation

Following the agreement with the World Bank, it was decided to appoint a multi-disciplinary team of foreign and Indian consultants to assist the government. The international consultants led by KPMG were in the areas of management, economics, legal and regulatory issues and engineering.

Table 1 Name of international consultants

Name of the firm	Area
KPMG Peat Marwick, London	Management consultants
National Economic Research Associates Inc (NERA), USA	Economic Management
McKenna and Co, London	Legal Management
Monenco Agra Inc. Canada	Engineering Management

An equivalent of US\$ 63 million dollars was available from various funding agencies including the World Bank and the ODA (now DFID) to meet the consultancy expenses.

As a first step, nine working groups were set up. These Working Groups were to study different aspects of the power sector reforms, identify basic strategies adopted and make suitable recommendations by February 1995 (see Box 3).

A Steering Committee comprising Secretaries to the GoO from the ministries of Energy, Finance, and Law, the Chairman of the OSEB, and the Reform Project Director was to guide these Working Groups. A Reform Directorate was also created under a senior Chief Engineer supported by other staff for day-to-day monitoring of power sector reform activities. A special Task Force was also set up under the chairmanship of the Secretary (Energy) to oversee the working of the above directorate and to provide necessary guidance to the Working Groups.

The Working Groups consisted of international consultants, local consultants (many of them retired Chief Engineers of OSEB) and serving officers of OSEB / state government. This composition ensured that the Working Groups had access to relevant documents and that their recommendations were based on a thorough knowledge of the ground realities — legal, administrative, political, and social.

Box 3 Function of Working Groups	
Planning	Identify planning responsibilities of each entity and coordinating agency for interfacing with neighbouring utilities and the central planning process; draft information requirements from generators and distributors for planning; define system design criteria.
Metering	Finalize needs and specifications of meters at the interface points.
Commercial, Financial, and Asset Valuation	Prepare asset register with a view to fixing their values at the time of transfer from OSEB to its successor entities; work on capital structure of these entities and their cash flows.
Power Purchase Agreements	Draft power sales contract from generators to transmission company and from the latter to distribution companies.
Tariff	Look into various aspects of bulk and retail tariff and recommend changes in the level and structure; provide inputs on tariff for trading with neighbouring utilities.
Technical Interface	Map interface points between the transmission and distribution entities.
Legal and Regulation	Review existing legislations and draft a Reform Act.
Distribution	Make recommendations on splitting the distribution into zones
Human Resource Development	Identify manpower and training requirements; make recommendations on funds required for meeting terminal liabilities like pension, provident fund, gratuity etc. in the context of the reforms programme; formulate a VRS (voluntary retirement scheme)

Simultaneously a communications strategy aimed at winning over the stakeholders to the cause of reforms was also launched. At the very start, consultants made several presentations to the chief minister, groups of ministers and senior officers of the OSEB /state government to explain to them the need for and the scope of the reforms. Consultations were also carried out through a council that included the state government, the electricity board, and consumer groups.

The first step in spreading the message of reform among the employees of OSEB was taken in January 1995 with a four-day workshop organized in the state

capital, Bhubaneswar. Officers of the rank of superintending engineer and above, most of them deputed to the OSEB from the state government, participated. This was followed by separate workshops for unionized employees. The main purpose of these workshops was to emphasize the following:

- The reforms are driven by the needs of the utility and the consumers, and are not dictated to by any external agency. The Working Groups, in fact, comprised local experts, with foreign consultants providing assistance.
- Even senior officers of the Board did not have a clear idea of the OSEB's deteriorating finances. It was imperative that the true state of the finances of the Board be revealed to the participants to make them aware of the urgency and a willingness to change.
- The reforms should start at the top, with the senior officers, as agents of change, agreeing to a set of common goals and a time bound programme to achieve them.
- There would be no retrenchment (compulsory redundancy) under any circumstances.
- Preference/willingness of employees to join the successor entities of OSEB would be obtained before they were assigned to new entities.
- The employee entitlement on account of salary allowances, leave holidays, seniority, and terminal benefits such as pension, provident fund, gratuity etc. would be fully protected.
- Officers' Service Regulations for the successor entities would be framed in consultation with officers and circulated to them to help them indicate their preferences. For non-executives, all earlier wage agreements would be honoured by the new entities.

Similar workshops were thereafter held with employees in different circles and divisions. Predictably, the discussions started off on a note of suspicion and hostility, but by the time they ended, there was a grudging admission that there was a need for reforms, but nothing should be done without consulting and involving the employees at every stage.

Efforts were also made to reach out to the consumers through newspapers and television. The Chief Minister at the time, Biju Patnaik who flagged off the reforms and his successor, J B Patnaik were also fully supportive. Biju Patnaik was the first to hammer home to the legislators and to consumers that electricity costs money and has to be paid for by those who use it. There was nothing apologetic about their stand. During the debates on the Orissa Electricity Reform Bill in the Assembly, Chief Minister J B Patnaik reinforced the message of reform. There was no strong farm lobby in Orissa.

4 Reform blue print

Based on inputs from the Working Groups, the GoO finalized the blue print for the reform programme. It's key features related to establishment of a regulatory commission, restructuring of the OSEB, privatization strategy, competition, and tariff reforms. The same was also communicated to the World Bank along with an expression of the government's commitment.

Establishment of the OERC (Orissa Electricity Regulatory Commission)

The regulatory commission was to be a multi-member body, with one of the members functioning as chairperson. The qualifications and appointment procedures and the conditions of appointment were specified in the legislations to ensure the selection of qualified persons. The OERC was required to work at 'arms length' from the government in a transparent and accountable manner. The functions and powers of the proposed commission included:

- Setting retail tariffs for the distribution companies and the bulk supply and transmission tariffs of GRIDCO;
- Setting related performance standards in the supply of electricity;
- Setting performance standards in the promotion of efficient use of electricity by consumers to be achieved by licencees;
- Settlement of certain disputes between licencees and consumers;
- Advice to GoO in matters concerning generation, transmission, distribution, and supply of electricity in the state;
- Issue of licence to those engaged in transmission, distributions, and supply.
- Regulating the working of licencees;
- Creation of environment for private sector participation and,
- Promotion of competition.

The proceedings of the commission were deemed to be quasi-judicial.

Restructuring of the OSEB

The power supply industry can be restructured in a number of ways (Fig 1)(MOP 2002). A combination of these models could also be evolved. These differ from each other from the point of view of government control, extent of private sector participation, functional grouping, and level of competition. In the case of Orissa, the structure was primarily guided, by the 1993 policy guidelines of the World Bank loans to utilities.

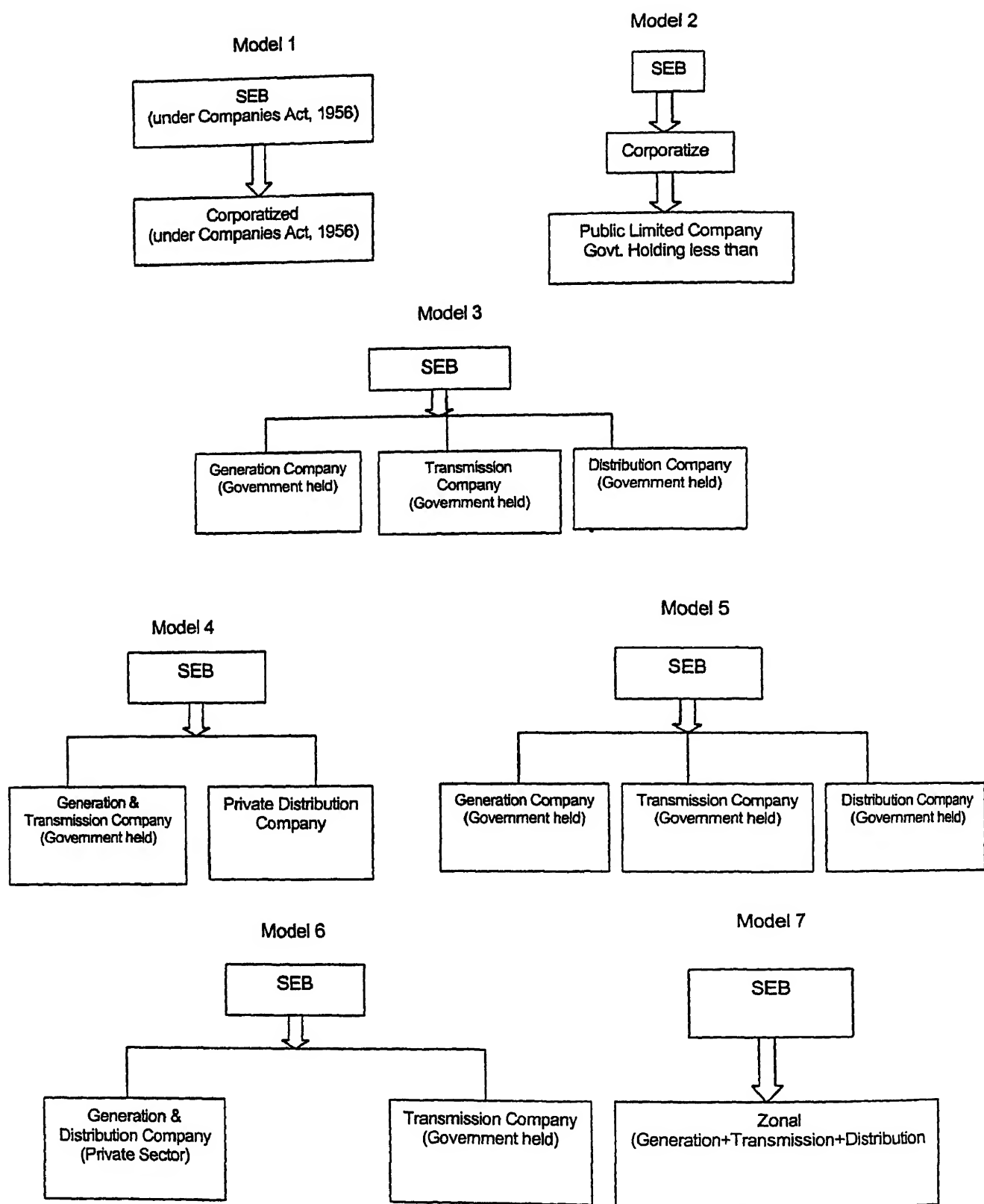


Figure 1 Generic models for restructuring power supply industry

Accordingly, the generation, transmission, and distribution functions of the OSEB were to be unbundled and, to start with, corporatized. It was proposed that the transmission and distribution functions would be performed by one corporation, the GRIDCO. The distribution business was then to be demarcated into four zones and separate corporations created as subsidiaries of GRIDCO. The decisions on zoning was based on detailed studies carried out by the Working Group on Distribution, on the size, configuration, present and anticipated sales, and consumer mix, likely revenue streams, etc.

The outcome of the studies is shown in Table 2. Each zone comprises between 4000 to 5000 staff with the exception of Central Zone, which has approximately 8500 staff. There was near uniformity in the salient features of all zones except the Central. The structure of each zone is similar with each comprising 2 to 3 circles with 3 to 7 Divisions, each of which has 2 to 6 Sub-Divisions. These in turn are sub-divided into a number of Sections which would typically cater to 3000 to 4000 consumers in urban areas and 1600–2000 in rural areas.

Table 2 Key statistics of each zone

	Western	N. Eastern	Southern	Central
Population as per 1991 census ('000)	7579	7410	7035	9636
Consumers ('000)	257	214	290	452
Area ('000 sq km)	48	28	47	29
Consumers as a % of population (%)	3.4	2.9	4.1	4.7
Technical losses (%) (97/98)	17.1	19.6	19.3	16.9
Non-technical loss (%) (97/98)	22.6	23.2	20.2	31.6
Employees (1 January 1998)	5572	4610	5013	8820
Km network as of 31 st March 1997 ('000)	30.1	26.3	23.6	28.3
Electricity sales (Gwh)	1557	1149	882	1851
Electricity sales/population (GWh)	0.21	0.16	0.13	0.19

Source: Privatization of Electricity Distribution in Orissa, India, Information Memorandum

These corporations were later to be privatized. The industry structure as per this blueprint is shown in Figure 2.

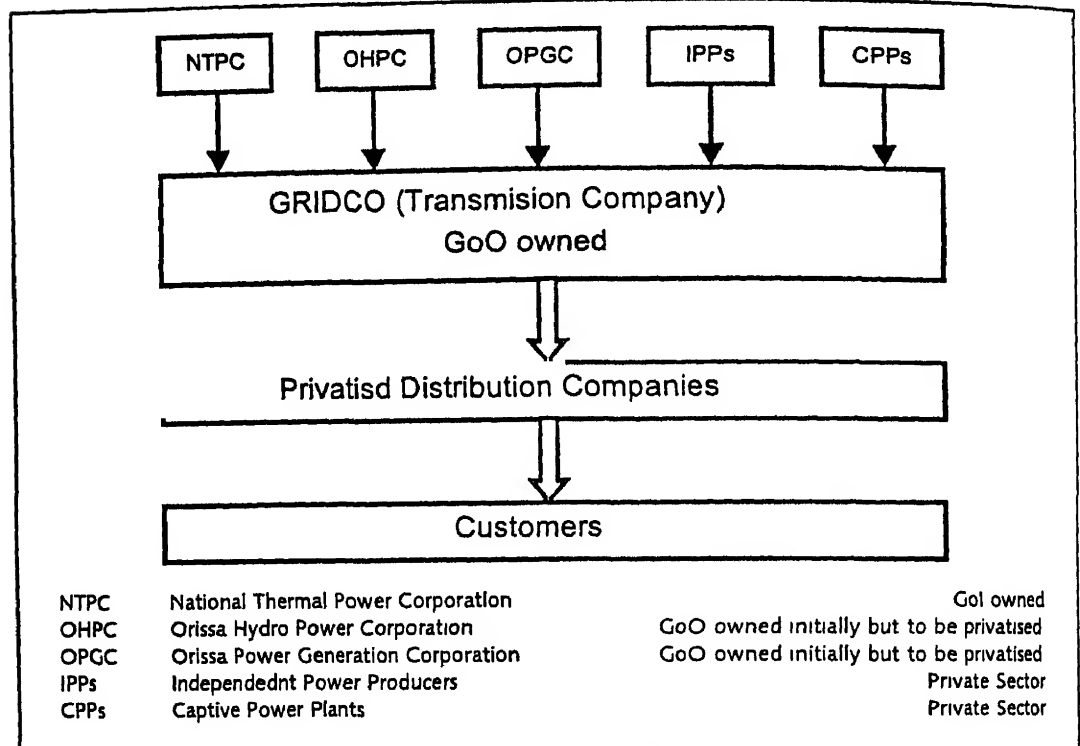


Figure 2 Blueprint for power supply industry structure in Orissa

Privatization of distribution

The following options were considered for privatization of the four distribution zones.

Trade sale:

It is an outright sale of the assets to a company in the same trade. An outright sale is the easiest method of transferring management responsibility into the hands of the private investor. There is however, the possibility of public criticism that GRIDCO has 'sold off the family silver'. The fear that GRIDCO would retain neither the means for ensuring effective performance from the private sector nor the ability to prevent the disposal of the business or the assets eventually ruled out this mode of privatization.

Public placement or floatation

While this is similar to an outright sale, the difference is that the shares in the distribution companies are sold through open offer, which is not restricted to parties already in the same trade. Most of the perceived advantages of a Trade Sale would apply in this case also but uncertainties and difficulties in the structuring of a deal, which would attract private investors, ruled out this mode.

Long-term lease

This is a lease for 25 to 99 years terminable in the event of default, insolvency or non-performance. The lessee gets operational control of the assets for which he may pay a consideration in one or more installments. The leased assets would revert back on expiry of the term. The perceived disadvantage of this mode is that the risk of running the enterprise is not transferred to the lessee. There is also uncertainty about the lessee's control over the staff. This mode also was hence found unacceptable.

Long-term concession

This is a concession for a period of 30–40 years. The consideration amount will be paid through premium and rental payments. As in the case of a long-term lease, there is termination in the event of default, insolvency or non-performance of the concessionaire. The perceived disadvantages are that the fixed term of the concession will give no incentive to make investments; there are not enough safeguards to protect the interests of GRIDCO in the event of the concessionaire abandoning the business.

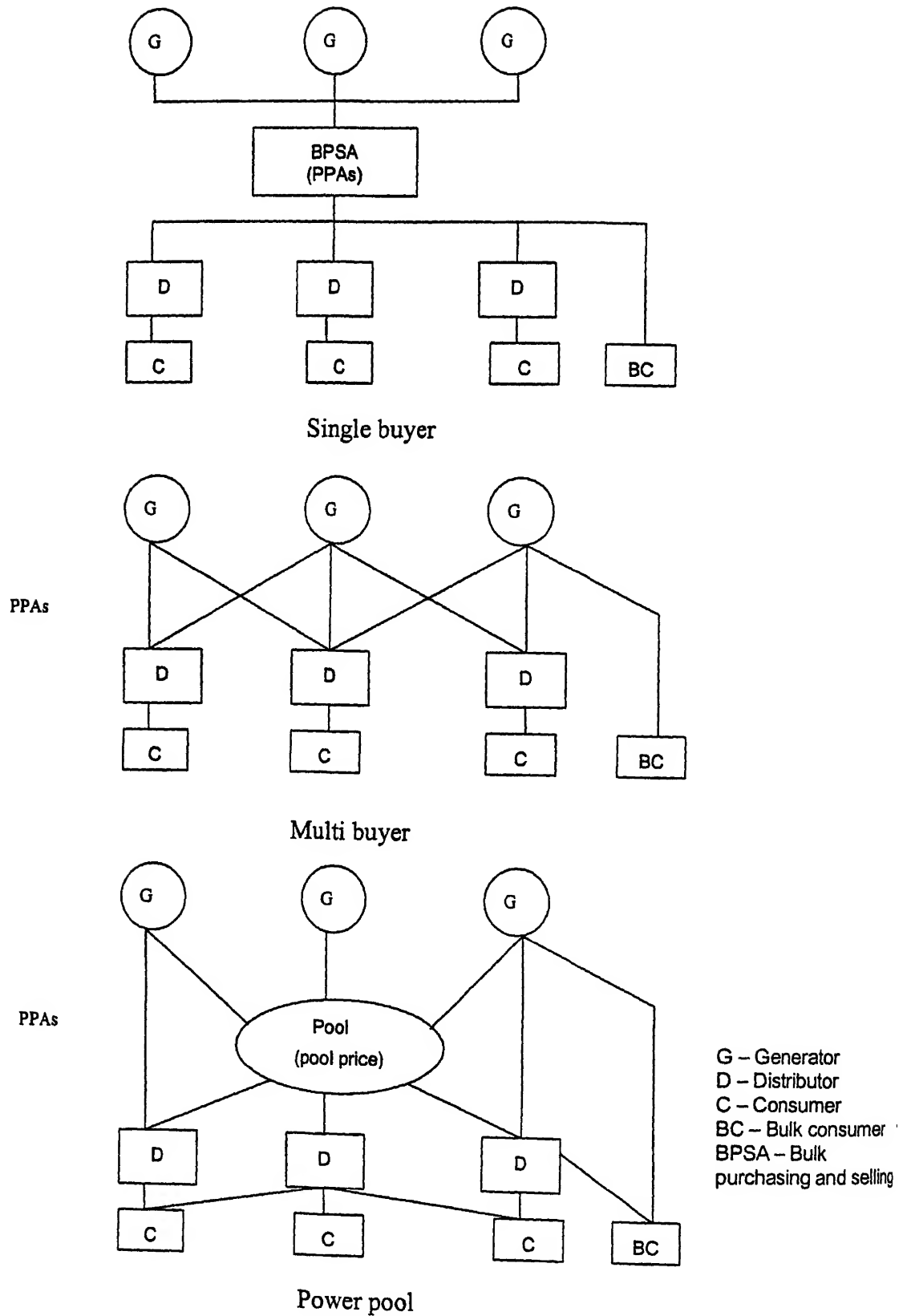


Fig 3: Generic power purchase models

Management contract

Under a management contract, the ownership of the assets remains with GRIDCO but the management of the company is contracted out to a party chosen through open tender. GRIDCO would continue to be responsible for making investments. The obvious disadvantages are several. There is no transfer of risk to the management contractor. The contractor's control over the staff placed at his disposal is questionable. The contractor has no responsibility for any investment.

Joint venture

Selling 51% of GRIDCO's shareholding in the distribution company to a private investor selected through competitive bidding. The private investor would be fully responsible for investments as well as for managing the distribution business. The majority shareholder would have full control over staff employed by the company. GRIDCO would retain 49% of the shareholding out of which 10% would be given to employees' shareholding trusts, who are also entitled to have a representative on the Board of the company. This would give a measure of comfort to the state government and employees — in the event of non-performance or malpractices such as asset-stripping by the majority shareholder, the state government would not be completely helpless.

It was finally decided to try out management contract in the central zone and then go in for the JV model for all DISTCOs. It was expected that the management of the contract would bring in private sector skills into the management of distribution business, and generate investor confidence. It was also anticipated that this management contract would be converted into a long-term lease in about three years. For the other three zones, it was agreed that there might be advantage in privatizing them (in the joint sector venture mode) sequentially so that errors would not be repeated (GoI 1998). Accordingly, it was decided to privatize all the zones by the end of year 2000 at the latest as per the following timetable (GRIDCO 1997):

First Zone – Management Contract

Second Zone – Contract to be signed by December 31st 1998

Third zone – Contract to be signed by December 31st 1999

First Zone – December 31st 1999 (long term arrangement)

Fourth Zone – Contract to be signed by December 31st 2000

Preparation of a Reform Bill

'Electricity' is a concurrent subject specified in List III of the Seventh Schedule to the Constitution of India. This means that both the Parliament and the State Legislature have the authority to legislate on the subject but an Act enacted by the Parliament (Central Act) shall prevail over an Act enacted by the Legislature of the State (State Act). Also, the states are bound by the Electricity (Supply) Act 1948, which is a Central Act and lays down the functions and duties to be performed by the Electricity Board. However, Article 254 of the Constitution empowers the legislature of the state to enact laws in relation to electricity even if it is inconsistent with or contrary to the Central Acts. This would, however require the assent of the President of India to remain valid (TERI 1999). Since the existing legislative framework did not provide for implementing the reform

components envisaged in Orissa, for example, establishment of an electricity regulatory commission, unbundling and corporatization/privatization of the SEB, etc., a new legislation was necessary. It was also necessary to process it through the Gol and obtain Presidential assent.

5 Unbundling and corporatizing the OSEB

Implementation of the reform blue print started with the enactment of the Reform Bill. It was notified in January 1996 and came into force on April 1996. The OERC became functional in August 1996. The two new corporations, GRIDCO and OHPC, into which the OSEB was initially unbundled had been incorporated in April 1995 under the Companies Act of 1956.

On 1 April 1996 GRIDCO took over the transmission (all lines and substations above 33 kV) and distribution (lines and substations at 33 kV and below) assets of OSEB. All hydro projects of the DoE and OSEB were also transferred to the OHPC. GRIDCO was further unbundled into one transmission and four distribution corporations. The distribution companies were: the Central Electricity Supply Company of Orissa Limited (CESCO), the Western Electricity Supply Company of Orissa Limited (WESCO), the North Eastern Electricity Supply Company of Orissa Limited (NESCO), and the Southern Electricity Supply Company of Orissa Limited (SOUTHCO). All these four companies began their activities as subsidiaries of GRIDCO from November 1998 and the 43 Distribution Divisions of GRIDCO were transferred to these respective subsidiary companies on 26 November 1998, pursuant to the Orissa Electricity Reforms (transfer of assets, liabilities, proceedings, and personnel of GRIDCO to distribution companies) Rules 1998. The balance sheet restructuring and transfer policies adopted in this regard are briefly discussed below:

Balance sheet restructuring

Preparing of a healthy and realistic balance sheet is an essential prerequisite for the corporatization and privatization of any enterprise. Once the exercise is completed, it is expected that it would allow for additional investment to be brought in by achieving appropriate gearing and adequate returns to the investor, and that it would not lead to a tariff shock to the consumers. The liabilities of the company may need to be restructured through writing-off or transfer to ensure that the debt-equity ratio and the debt-service coverage ratio do not exceed what financial institutions in the sector find acceptable. The restructuring of a balance sheet, may or may not be accompanied by revaluation. If revaluation of assets is involved as a part of the restructuring exercise, three options are available:

- Go by the depreciated book value
- Get the asset revalued
- Assess the business value of the proposed transaction.

Each of these options has its merit and demerits from the point of view of the government, the consumer, and the prospective investor. Valuation of assets on the basis of book value less depreciation is likely to produce an unacceptably low value, while revaluation may result in a substantially high value. The government of the day can not be seen to be underselling its assets and would be interested

in getting at least as much money as value. From this angle, the route of revaluation of assets appears attractive. However, any substantial upward revision of the value of assets could lead to considerable tariff increases, since the tariff is calculated in accordance with the provisions of the Sixth Schedule to the Electricity (Supply) Act, i.e. it is based on the concepts of capital base. Such tariff shocks may not be desirable, particularly so in the initial stages of the reform process as they would undercut the sustainability of the reform process itself. At the same time, what matters to the successor company is the income it can produce from the assets as a going concern during the life of the license. All these considerations, therefore, define the contours of the context in which a pragmatic judgment has to be skillfully made.

In Orissa, the GoI took over all transmission and distribution assets, and hydro stations of OSEB at a historical depreciated cost of 1036 crore rupees. It then transferred the T&D assets to GRIDCO at depreciated replacement value of 1,958 crore rupees (historical cost Rs. 838 crore). Against the T&D assets, the GoO transferred to GRIDCO 109 crore rupees of loans taken from the PFC, 498 crore rupees from other lenders and also converted 73 crore rupees of its own loans into share capital.

Against the revaluation of fixed assets by 1120 crore rupees, 39.2 crore rupees of electricity charges and 301.2 crore rupees of subsidy payable by the GoO were adjusted. Rs 50.6 crore worth of unserviceable maintenance stocks were also written off, leaving a net increase in assets of 729 crore rupees. The corresponding increase in liabilities involved a conversion of 73.2 crore rupees of GoO loans into equity in addition to issuing a fresh equity to the GoO of 253 crore rupees, and the issue of partly convertible bonds of 400 crore rupees and 150 crore rupees respectively to the GoO and the Employee Trust. The total additional liability thus created was 803 crore rupees. It may be seen that in the process of this restructuring exercise, there was no fresh infusion of cash in the business of the new entity. The restructuring exercise provided that the dividends, if any, payable by the GRIDCO for the first four years would be ploughed back in the shape of fresh loans. It was also provided that the bond to the GoO would not carry any interest for the first five years and further, that part one amounting to 200 crore rupees would be convertible into equity in three equal installments in the 6th, 8th, and 10th years. The remaining part was to carry interest at the rate of 13% per annum until redemption in a period of 15 years, with a moratorium on interest of 5 years. The opening balance sheet (provisional) of the four DISTCOs is in Annexure A.

Table 3 Opening balance sheet for the year 1996/97

Opening balance sheet FY 97	From OSEB To GRIDCO (Rs Lakhs)	
FIXED ASSETS		
Gross Fixed Assets	11032	11032
Revaluation of Assets		11200
Interest and Expenses Capitalized	975	975
Less Accumulated depreciation	3630	3630
Net fixed assets	8378	19578
Cap. Exp. in progress	1340	1340
Total Fixed Assets	9718	20918
CURRENT ASSETS		
Cash and Bank Balances	308	308
Total Stocks	656	150
Receivables for sale of Electricity	5857	1468
Provision for Bad and Doubtful debts	3997	0
Net receivables	1860	1468
RE subsidy receivables	3012	0
Other Receivables	1115	1115
Total current Assets	6951	3041
TOTAL ASSETS	16669	23958
NET WORTH		
Equity	0	3262
Consumer's contribution	1323	1323
Retained earning (losses reserves)	270	270
Restructuring Account	740	0
Grants	478	478
Total net worth	2811	5333
Staff Superannuation Fund (GPF)	898	898
Other Reserve Funds	173	173
LONG TERM DEBTS		
State Government loans	732	0
PFC Loans	1182	1012
Other loans	5530	4977
Partially convertible bond issued to GOO		4000
Partially convertible bond issued to pension trust		1500
Total Long Term Loans	7444	11489
CURRENT LIABILITIES		
Account payable	4655	4655
Current Maturity Debt	0	723
Deposits from consumers	404	404
Accrued interest on non-govt. loans	284	284
Borrowing for working capital	0	0
Total current liabilities	5344	6067
TOTAL LIABILITIES	16669	23958

Transfer policies for employees

In reorganizing any industry, issues relating to transfer of employees are always of great significance. A correct legal and pragmatic approach is needed in dealing with these issues. A special feature in the case of the OSEB was that unlike in

other SEBs, the entire cadre of engineers was on deputation from the government. Transfers can be done by agreement or by operation of law (legislation passed in larger public interest). The sanctity of a transfer is significantly greater in the latter case, that of a statutory scheme. Accordingly, a separate section relating to transfer of personnel to GRIDCO and OHPC was included in the Orissa Electricity Reform Act.

The HRD Working Group set up in April 1994 looked into the staffing norms for the OSEB and its successor entities, training needs, funding needs for pension, provident fund and other terminal liabilities and criteria, and the mechanism for a VRS (voluntary retirement scheme). In its report of February 1995, the working group noted inter alia, that on the basis of norms in some of the other SEBs and nearby countries there was an overstaffing of 7–15% in hydel generation and 50% in the distribution set up of the OSEB. At the same time it cautioned that this was based on very broad comparisons and should not be taken as the basis for a staff reduction exercise. The report also strongly recommended that there should be no retrenchment in the absence of any social security net to help out those who lose employment. The possibility of a well-structured VRS along with likely costs was also discussed.

Towards the end of 1995 a fresh attempt was made to arrive at the staff requirement on the basis of physical and geographical conditions in Orissa, the work practices and other factors. This involved detailed discussions with the field organizations of GRIDCO and covered both the transmission and distribution functions. With the help of consultants, separate norms were evolved for the four distinct geographical divisions of the state, the coastal plain, northern plateau, western Ghats, (hilly terrain) and the central plateau. Within these broad geographical divisions, separate norms were evolved for urban, semi-urban and rural areas. Simultaneously, the study identified training needs of the organizations including the number of employees to be trained and the areas where they needed training. At the end of this exercise, it was found that after training the surplus staff would be 10% in transmission and 16% in distribution.

On the above basis employees of the erstwhile OSEB were transferred to GRIDCO and OHPC. In the case of GRIDCO, part of the employees were to be further transferred to the DISTCOs. In November 1998 the government notified transfer scheme rules for a transfer of the distribution companies, namely CESCO, WESCO, NESCO, and SOUTHCO. The spirit of this scheme was essentially the same. GRIDCO also put into operation the VRS as a result of which 42 officers and 641 non-executives had left the organization by the time the DISTCOs were privatized.

After creation of GRIDCO and OHPC, the respective management continued to maintain a dialogue with officers and staff. GRIDCO started a bi-monthly newsletter to open a direct and regular channel of communication with its employees. The newsletter featured a message from the Chairman in which he discussed topics of burning interest to the employees and kept them informed of concrete steps taken to safeguard their interests. The employee's questions were answered clearly. GRIDCO also took a number of measures — they checked stagnation of officers, regularized ad hoc engineers and work-charged labourers,

negotiated fresh wages, etc. to assure them that the reform programme was employee-friendly.

These measures contributed to the fact that the OSEB (which had 35,000 odd employees belonging to 46 unions, loosely affiliated to 4 federations) did not lose any time on account of employee's protests against the restructuring.

6 Management Contract

As per the distribution privatization strategy, GRIDCO initiated action to award the management contract for the Central zone (comprising the Circles of Bhubaneswar, Cutback, and Dhenkanal) to a private company. It held discussions with a number of private operators and finally awarded the contract to the Bombay Suburban Electricity Supply Limited (BSES). The Distribution Operation Agreement (DOA) was signed on 1 October 1996.

Provisions in the DOA

The DOA was a detailed document spelling out, inter alia, the duties and responsibilities of BSES and GRIDCO, payment terms, etc. The fees to be paid to BSES had three components, (i) a management fee, basic incentive fee, and a supplementary incentive fee. The management fee was around 4.187 crore rupees in subsequent years. The incentive fees were based on some elaborate formulae taking into account a host of factors such as billing, collection, metering, repair and maintenance expenditure, etc. during the period prior to the award of contract. The validity of the contract was 3 years; but there was also a provision for early termination. This could be by mutual agreement or one of the parties could invoke the termination based on certain stipulated criteria. One such condition, which gave GRIDCO the right to terminate the contract, was if the product of the following formulae (calculated in respect of any incentive fee calculation period) became negative.

$$\left\{ R_1 \times \left(\frac{B_2}{B_1} \right) \right\} + R_4 - \left\{ R_3 \times \left(\frac{T_2}{T_1} \right) \times \left(\frac{S_2}{S_1} \right) \right\}$$

Where

R_1 and R_2 = Revenue collected from EHT consumers during base and incentive period

R_3 and R_4 = Revenue from LT consumers

B_1 and B_2 = EHT billings

T_1 and T_2 = Average LT Tariff

S_1 and S_2 = Electricity supplied to LT consumer downside of 132/33 kV sub-stations.

The DOA had provided that if GRIDCO served notice on BSES terminating this agreement, BSES would pay to GRIDCO an amount equal to that paid to BSES by GRIDCO multiplied by $X/12$, where X is equal to 12 minus the number of monthly Management Fee Invoices, which were served on or prior to the date of such notice. In the event of early termination by GRIDCO, no Basic Incentive Fee or Supplementary Incentive Fee would be payable in respect of any unexpired

Incentive Fee Calculation Period. However, if the termination occurred due to a default or breach attributable to BSES, it would be entitled to a proportionate amount of any Basic Incentive Fee or Supplementary Incentive Fee in respect of that part of the Incentive Fee Calculation period, which had expired on the date, it terminates this agreement.

In case of any dispute between GRIDCO and BSES, which could not be resolved by the Management Committee (comprising Chief Executive and Chief Engineer of BSES and Director (Distribution) and Chief Engineer of GRIDCO), it was to be referred to the High Power Steering Committee consisting of the Chairman and Managing Directors of GRIDCO and BSES. The next course for resolution was by arbitration.

Some of the conditions of the DOA were (DOA 1996):

- 1 BSES shall acquire no proprietary interest in any of the distribution assets,
- 2 BSES shall have no right or discretion in relation to the fixing of tariffs,
- 3 BSES shall have the right to discuss a longer term arrangement provided it has complied in all material respects with the terms of the agreement,
- 4 Key management personnel amongst the GRIDCO staff shall not be reallocated, transferred to other positions or removed or replaced by GRIDCO without the prior written consent of BSES. Before taking any decision with regard to the disciplining of any of the GRIDCO staff who is a member of the Orissa Electrical Engineering Service, the consent of the GoO (as the lending authority) shall be obtained by the GRIDCO (as the borrowing authority).

The contract could not prescribe any specific level of performance for the BSES because reliable data were not available. The finalization of the DOA was, one of the preconditions for World Bank aid and this factor set the pace of the negotiations with BSES. It was noted by GRIDCO that the document was far from perfect, but as it was to be converted into a long-term agreement subsequently, it was decided to go ahead with it.

Contract performance

The performance of the contract did not proceed smoothly. GRIDCO and BSES did not get along well on many issues. According to GRIDCO, BSES had more than once agreed to open counters in important centres to receive consumer's complaints. But BSES wanted additional staff for this which GRIDCO did not agree to. The scheme of opening counters did not therefore take off. BSES had also gone back on its earlier agreement to post assistant managers (Finance) as part of tightening revenue billing and collection activities. GRIDCO had also serious concerns about the attitude of BSES personnel, especially their senior management at Bhubaneswar. GRIDCO also realized that there were certain

inherent shortcomings in the contract such as no penalty clause, management fee unrelated to performance, etc.

BSES felt that non-cooperation by GRIDCO was the major hurdle. Since all the employees belonged to GRIDCO, they were not accountable to BSES. BSES had tried to get officers and staff on deputation before entering into the contract, but the Government of Orissa's Tribunal ruled that they would remain employees of the government alone (Sinha 2002). Also, the BSES was not willing to invest in improving the network's condition, since it only had management control but no ownership rights. In the mean time there was a steep deterioration in the collection during the 6-month period it was under the DOA compared to the previous 6-month period. While collection's in 1997 (April-September) exceeded the collection during the corresponding period in 1996 by 51%, the corresponding increase for the period October-March (DOA period) was only 22%. The product derived from the incentive fee calculations had also become negative.

Termination of the contract

GRIDCO took up a detailed review of the situation and it was noted that if contracts were allowed to drift in this fashion, the investor's confidence would be very seriously eroded. This would be a boon to the private party selected to take over the Central Zone under a long-term privatization agreement as it would be able to grab the zone at a throwaway price but such a development was to be avoided at all costs (GRIDCO 1997). The termination of the DOA nationally and internationally led to, the consensus that the signal that had gone out was positive, namely that GRIDCO had accepted privatization not for its own sake, but because it was expected to be more efficient and responsive than a state-run system. If this aim was not realized, the arrangement with a private party would be terminated. Further, it was decided that a brief factual account of the matter should be published in the press to set at rest the rumours and half truths that were being circulated. The DOA was finally terminated on 30 April 1997 (GRIDCO 1997). BSES held the view that six months was too short a period to judge performance.

Soon after DOA was terminated, BSES issued legal notices to GRIDCO claiming damages of several crores of rupees. GRIDCO countered with even higher claims. The row between them was settled after mutual discussions. BSES withdrew its damage claim and GRIDCO agreed not to debar BSES from taking part in future privatization ventures. BSES also refunded the portion of the management fee relating to the post- termination period of the contract, which was paid in advance by GRIDCO.

7 Process of disinvestment

After the premature termination of the management contract, the GoO decided to go ahead with its plans to privatize the distribution system at one shot by offering 51% equity to private distribution companies in all the four zones. The International Competitive Bidding (ICB) route was taken to select private investors. Several factors contributed to this decision which was different from the earlier one to go in for a sequential privatization. The most important reason was the continued deterioration of the distribution set up. Another reason was that a period of prolonged uncertainty should be avoided since it would lead to demoralization of the staff and fall of productivity [15]. The preparation of the documentation and the process of inviting bids and selecting the successful bidders would be very time consuming and expensive and would be best completed at one stroke. It was also hoped that offering all the four zones for privatization would stimulate investor interest, bring in better bids and wider participation (GRIDCO 2002).

Pre-qualification of bidders

The first step in implementing the privatization strategy was to find out private investors who were interested in and qualified for the job. Accordingly, a Request for Qualification (RFQ) was prepared and widely circulated. It was published in three leading Indian dailies in English, sent out to all the Indian Embassies and High Commissions, the World Bank etc. Publicity was also given through some of leading Merchant Bankers. The document contained background information about prospective business and stipulated that the bidders may either quote for the DISTCOs individually or in a combination of two. The maximum number of bids which any bidder was allowed to make was ten. The main qualification criteria for these consortia or companies were:

- 3 years of operational experience in 33 kV distribution with over 100000 customers
- A turnover of 100 million dollars in the case of foreign companies and 350 million dollars in the case of Indian companies.
- Foreign firms should have at least one Indian partner (minimum 5% stake) in the consortium

The following companies or consortia were not eligible:

- Companies/consortia including companies generating electricity in the state of Orissa and which sell electricity to GRIDCO
- Companies/consortia including companies supplying power to GRIDCO.

In response to the RFQ, GRIDCO received 51 bids for which the following 11 companies or consortia pre-qualified.

- 1 Reliance Industries Limited and Escom of South Africa
- 2 Enron Corporation, Portland General Electric (Enron subsidiary company based in Portland, Oregon), and Delhi-based EMCO Transformers Limited
- 3 BSES Limited
- 4 National Grid Company, Energy Australia and Modicorp Private Limited
- 5 Grasim Industries, Singapore Power
- 6 United Utilities, UK, and AMP Life Limited, Australia and Indure Limited
- 7 Electricity de France, Infrastructure Leasing and Financial Services Limited
- 8 Cal Energy Company Inc, Northern Electric Plc and Dishergarh Power Supply Company Limited
- 9 Hydro Quebec International, Canada and HEG Limited
- 10 Tata Electric Company, Northern Ireland Electricity of UK and Viridian Group (the holding company of Northern Ireland Electricity) and
- 11 AES Corporation, Jyoti Structures Limited.

Preparation of Information Memorandum

Simultaneously GRIDCO prepared an Information Memorandum (IM) for the benefit of all pre-qualified bidders. The IM covered important aspects of the business and features of the zonal businesses to be transferred to each of the DISTCOs. It covered broadly:

- An overview of the activities and organization of the zonal businesses;
- Sales of electricity by the zonal businesses including historic and projected load growth, tariffs, consumer mix, billing experience, and strategy for reduction of non-technical losses;
- A description of the physical system of the zonal businesses and programme of enhancement to improve system performance, increase capacity and reduce technical losses, which are being implemented (including planned improvements to the transmission system);
- The process of tariff -setting and other interactions with the OERC and the relationship of the zonal businesses with the GoO and GoI;
- An analysis of the employment issues relating to the zonal businesses and a description of the extensive training programme which have been implemented since 1996;
- A summary and analysis of the financial data relating to the zonal businesses for FY 1996/97 and FY 1997/98 and GRIDCO management projections for FY 1998/99 to FY 2001/02, and,
- Key provisions of the agreements to which, inter alia, the DISTCOs or purchasers will be a party, etc.

Some of the critical statistics included in the Information Memorandum are at Annexure C. The IM also provided a summary of what GRIDCO believed were the investment opportunities for potential bidders. However, the IM carried the following disclaimer:

"The Information Memorandum includes certain statements, estimates, projections, targets and forecasts with respect to GRIDCO, each of the DISTCOs,

the transmission and bulk supply business and the zonal businesses. Such statements, estimates, projections, targets and forecasts reflect various assumptions made by the management, officers and employees of GRIDCO, which assumptions (and the base information on which they are made) may or may not prove to be correct. No representation or warranty is given as to the reasonableness of, and no reliance should be placed on, any statements, estimates, projections, targets or forecasts or the assumptions on which they may be based and nothing in the Information Memorandum is, or should be relied on as, a promise, representation or warranty."

It also cautioned prospective bidders conduct their own analysis of the information contained in the IM and advised them to carry out their own investigations into the zonal businesses in Orissa, the legislative and regulatory regime which apply there and, any or all matters pertinent to the proposed privatization and to seek its own professional advice on the legal, financial, regulatory, and taxation consequences of entering into any agreement or arrangement relating to the proposed privatization. The reports prepared by various Working Groups and results of the studies undertaken by consultants were also made available to the bidders.

Due diligence

The bidders were given time for a due diligence programme covering visits to the sites of interest, visits to the data room which contained hundreds of documents covering all aspects of OSEB/GRIDCO's activities and one-on-one discussions. This was to be completed in phases covering the period from 9 September 1998 to 10 December 1998.

Phase 1 covered:

- Access to documents in the data room

The bidders were invited to review the documentation in the data room. Each bidder was given sole access to it for a three-day period when he was at liberty to obtain copies of any document he considered relevant. Details of documents available in the data room were also circulated.

- Site visits to the zones

The bidders were also asked to make site visits to the zones in order to get a feel of the ground situation.

Phase 2 covered:

- Pre-bid conferences with the bidders and question-and-answer sessions

The areas covered during the pre-bid conferences were: the sale process dealing with details of investment structures, technical and financial bids, contractual documentation, financial projections, billing and collection procedure, and tariff policy and mechanics.

- Seeking information through written questions

The bidders were encouraged to seek information through written questions. All questions and answers were circulated to all bidders to make sure that each Bidder had exactly the same information as his competitor (Kanungo Committee Report 2001).(Kanungo Committee 2001)

Phase 3 was earmarked for further visits to the data room and discussions.

- Because of local elections, the due diligence exercise took three weeks more than anticipated. None of the bidders sought any extension of the due diligence period. In fact, BSES had first-hand knowledge of CESCO by virtue of being a management contractor for that DISTCO for 6 months.

RFP (request for proposal)

The Request for Proposal (RFP) documents were sent out to all the 11 pre-qualified bidders. The bids were submitted in two parts, technical and financial. The technical bid part of the RFP contained a detailed questionnaire designed to ensure that the bidders had made a study of the distribution business in Orissa. The bids were to be awarded marks based on their responses. In the first category of questions, the bidders were expected to clarify the following matters: the investment structure and preferred route, proposed capital and R&M expenditure, reduction of technical and non-technical losses, improvement in billing and collection, human resources (training, safety and management), consumer services, public relations, and regulatory issues. This carried a total of 500 marks. In another set the bidders were required to develop a preliminary plan of short, medium and long- term options and measures that would be implemented in Orissa. The bidders were specifically required to demonstrate their understanding of the distribution system and business as it currently operated. They were asked to show how they would apply their knowledge and understanding in operating and managing distribution business based on their own experience elsewhere. This carried a total of 250 marks. The minimum qualifying marks were fixed at 450 out of the total 750. It was also stipulated that no bidder would be allowed to buy more than two DISTCOs or to attach any conditions along with their proposals. There was no proposal to rank the technical bids, but it was stipulated that GRIDCO would open the financial bids of only bidders who got the minimum qualifying marks. The successful bidder was to be the one who offered the best price while satisfying the other conditions.

Two committees one technical and the other financial were formed to evaluate the proposals. The committees had nominees from GRIDCO, GoO as well as other experts from outside.

Out of the 11 pre-qualified bidders, the companies at serial numbers 4,6, and 9 dropped out after the due diligence exercise. Of the remaining seven, four did not participate in the bidding process for reasons such as the Asian Economic Crisis, Pokharan-II blast or because they were unviable and small businesses, and regulatory risks [20], etc. Finally only the following three bidders, met the technical requirements.

BSES Limited
Singapore Power and Grasim Industry

TEC-Viridian

A competitive statement of the offers received from the 3 bidders is given below:

DISTCO	51% face value (Rs crore)	Offer (Rs crore)		
		BSES	Grasim	TEC
WESCO	24.81	54.585	36.975	1.64
NESCO	33.614	33.614	No bid	0.71
SOUTHCO	19.20	28.81	No bid	0.569
CESCO	37.08	33.41*	No bid	41.00*

*During re-bid

In addition to the four individual DISTCOs, BSES had also submitted two combination bids, one for WESCO and NESCO, and one for WESCO and SOUTHCO. If GRIDCO chose the latter combination, BSES had offered 30.73 crore rupees for SOUTHCO. There were no bids for CESCO. GRIDCO, therefore, went for a re-bid for this zone and solicited bids from all the seven pre-qualified bidders on the same terms and conditions as provided in the RFP except that bidders were allowed, if they considered it necessary, to stipulate conditions or reservations on a separate sheet attached to the financial bids. In response to this only BSES and TEC-Viridian submitted bids and both these had several conditions attached. TEC offered was for Rs 41.00 crore rupees compared to 33.41 crore rupees of BSES.

The GRIDCO Board deliberated at length on the different bids and decided to accept the offer of BSES for WESCO, NESCO, and SOUTHCO. Looking at the ground realities it also decided to relax the condition that no bidder could be given more than two DISTCOs. Further, it was decided that GRIDCO should not insist on the combination bid of BSES for WESCO and SOUTHCO, although it was slightly more attractive. This was because if GRIDCO did so, BSES might (relying on the RFP condition that it can not be compelled to take more than two companies) refuse to take NESCO under the individual bid. On the other hand, BSES had confirmed that if they had to take three companies, they would be willing to take WESCO and NESCO in combination and SOUTHCO under the individual bid. In case of CESCO, The Board decided to accept the 's offer of 41.0 crore rupees for CESCO subject to clarification from the bidder that the conditions included in their bid would not oblige GRIDCO to give financial support to CESCO to reduce shortfall in revenue. However, this could not be achieved and subsequently the bidder raised several issues in their meetings with GRIDCO making it clear that their offer was not unconditional. Sensing that the consortium was proposing long drawn negotiations (Rao 2001), a letter was issued to them on 12 April 1999 explaining the whole position and requesting them to complete the share acquisition documentation and pay the consideration by 4 p.m. on 13 April 1999; if the consortium failed it would amount to a breach of the bid's terms and conditions. The matter was received at the meeting of the Board of GRIDCO

on 13 April 1999 and further discussions were held with the consortium when a package of concessions was offered.

In spite of these efforts, the deal did not materialize and TEC-Viridian finally admitted their inability to complete the transaction. GRIDCO once again approached all the pre-qualified bidders and only the AES consortium expressed interest in CESCO subject to some new terms and conditions, which included GRIDCO opening an escrow account in favour of AES Ib Valley Project (a subsidiary of AES) and GoO accepting an offer from another AES subsidiary for the purchase of 2% more shares in OPGC. After further discussions, CESCO was offered to AES at a consideration of 4200 lakh rupees with effect from 1 September 1999. While taking this decision GRIDCO had noted that CESCO had been incurring losses of about 90 lakh rupees per day totalling of 120 –130 crores rupees from April end to August 1999 [18].

A summary of the prices offered to the successful bidders is in Table 4.

Table 4 Proceeds of disinvestment of 51% of equity shares of the 4 DISTCOs.

Name of Company	Name of the preferred purchaser	Amount offered (Rs in lakhs)	Offered price per share in Rs. (Face value Rs 10/-per share)
WESCO+	BSES	8819.94	15.10
NESCO			
SOUTHCO	BSES	2880.99	15.00
CESCO	AES-Jyoti	4200.00	11.32
Total		15900.93	13.86

Source: An overview of Gridco, 2002

8 Post-privatization scenario

Financial performance of DISTCOs

Based upon projections made by consultants intimated to prospective bidders through the IM, it was expected that WESCO and NESCO would achieve turn around by 1999–2000, SOUTHCO by 2000–01, and CESCO by 2001–02. However, none of the DISTCOs could achieve this and suffered losses even at the end of the third year (Table 5).

Table 5 Net profit/(loss) in Rs lakhs

	1999/00		2000/01		2001/02*	
	Projected	Actual	Projected	Actual	Projected	Actual
WESCO	656	(5818)	3893	(11189)	4931	(4081)
NESCO	1686	(5427)	4679	(12280)	7783	(20805)
SOUTHCO	(2585)	(8737)	4350	(8605)	2220	(8372)
CESCO	(12956)	(17773)	(3915)	(17229)	13212	(23968)

Source: Projected figures given in the IM and actual performance figures collected from the OERC. The figures in parenthesis indicate net loss, * Un-audited

Government subsidies

Prior to these reforms the GoO was providing subventions to the OSEB under Section 59 of the Supply Act 1948. This practice was withdrawn immediately in the post-reform period. In the process the GoO saved subsidy payments of about 2770 crores rupees during the period 1995–96 to 2000–01 (GRIDCO 1999). However, this put an added strain on the newly-created entities. The net loss to GRIDCO and DISTCOs during this period was about 2104 crore rupees. The OERC had observed that non-payment of subsidies was in consonance with the spirit of the Reform Act, but the government's financial back-up in the form of a subsidy during the transition period could have substantially eased the situation. In fact, a number of reforming states have made provisions for transitional funding; for example, Andhra Pradesh (1585 crore rupees), Gujarat (1260 crore rupees), Uttar Pradesh (790 crore rupees), Haryana (769.3 crores rupees for one year) Rajasthan (3496.6 crore rupees in four years), and Delhi at the rate (500 crore rupees per annum for five years) (GRIDCO 1999).

Quantum of sales

Figure 4 shows the quantum of sales actually realized by the DISTCOs alongside with those expected in the IM.

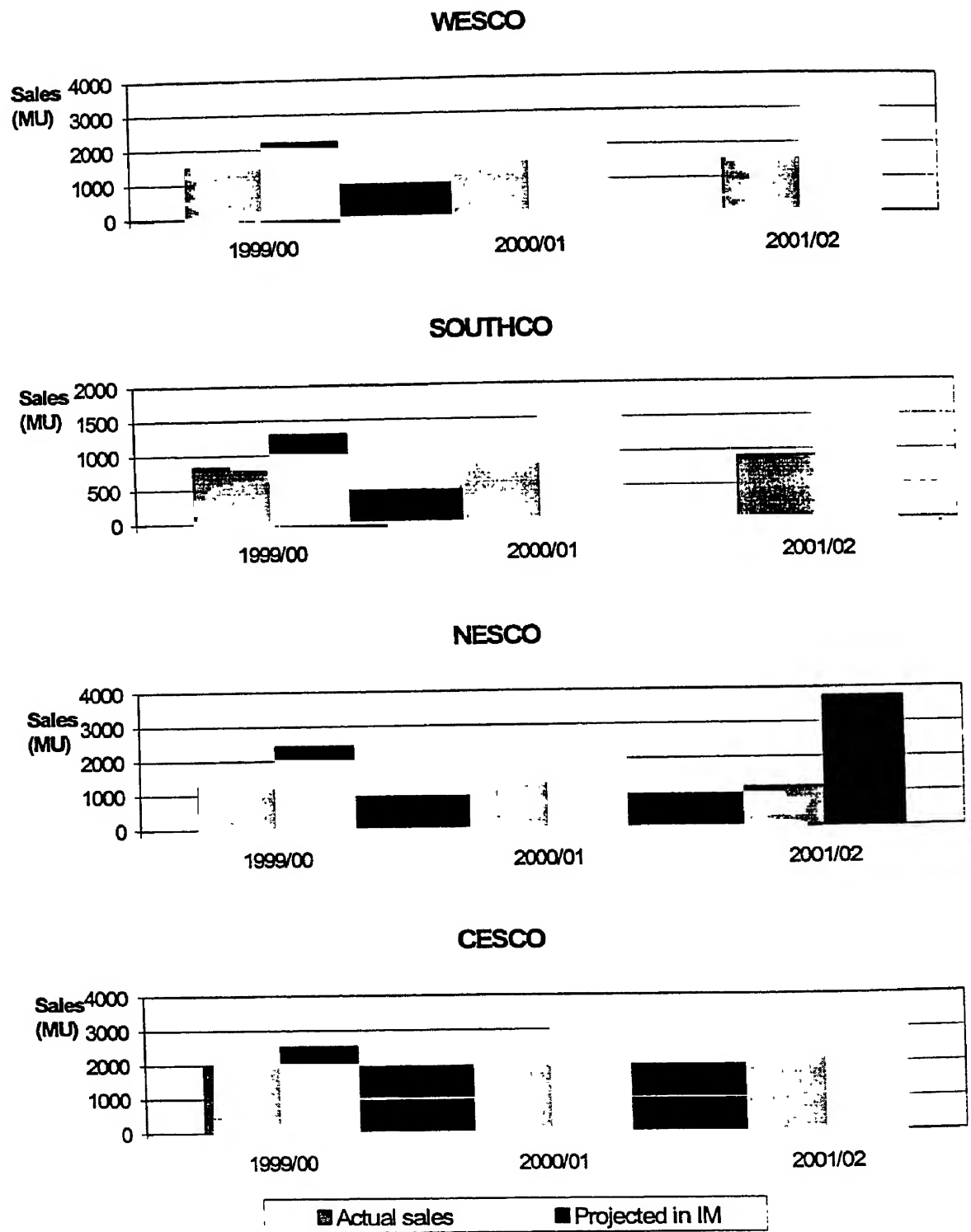


Figure 4: Actual vis-à-vis projected sales

Billing and collection

Figure 5 shows the collection efficiency in the post privatization period compared to what existed in the OSEB and GRIDCO regime. Tables 6 and 7 give the DISTCO wise position.

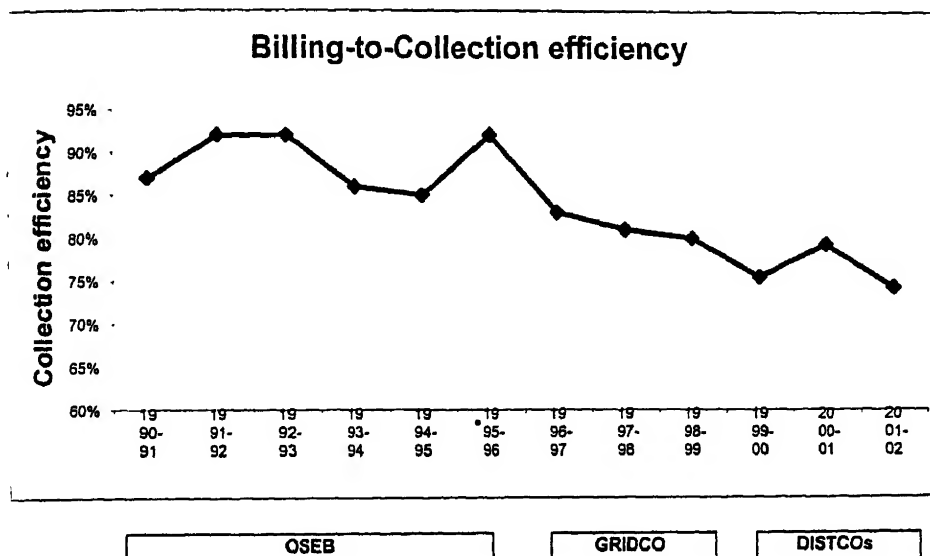


Figure 5 Collection efficiency prior/post reform

Table 6 Collection efficiency DISTCO- wise position

	Billing (Rs crore)	Collection (Rs crore)	Collection-to- billing efficiency
FY 1999/2000^a			
WESCO	427	350	81.97%
NESCO	327	244	74.62%
SOUTHCO	207	168	81.16%
CESCO	493	336	68.07%
Total	1454	1098	75.49%
FY 2000/01^a			
WESCO	472	364	77.12%
NESCO	317	276	87.07%
SOUTHCO	225	190	84.44%
CESCO	584	437	74.83%
	1598	1267	79.29%
FY 2001/02^b			
WESCO	509	400	78.59%
NESCO	338	228	67.46%
SOUTHCO	264	206	78.03%
CESCO	638	454	71.19%
	1733	1287	74.28%

Source: a- An overview of GRIDCO (April 96 to March 02);

b-OERC

Table 7 Consumer category-wise collection efficiency for 2001/02

	Billing (Rs crore)	Collection (Rs crore)	% of Collection- to-Billing
CESCO			
LT	356.71	211.36	59%
HT	163.65	183.41	112% ¹
EHT	117.85	59.55	51%
Sub-total	638.22	454.33	71%
NESCO			
LT	130.54	69.28	53%
HT	98.94	86.55	87%
EHT	108.78	71.73	66%
Sub-total	338.27	227.57	67%
WESCO			
LT	170.49	73.35	43%
HT	110.67	103.88	94%
EHT	227.37	222.35	98%
Sub-total	508.53	399.59	79%
SOUTHCO			
LT	140.72	90.54	64%
HT	49.87	45.83	92%
EHT	73.35	69.50	95%
Sub-total	263.95	205.87	78%
TOTAL	1748.98	1287.38	74%

Source: An overview of GRIDCO (April 96 to March 02)

¹ Percent of collection includes past dues collected during the year

Tariff levels

Table 8 Variations in electricity tariffs since FY 1997

	UNITS/ MONTH	1996/97	1997/98	1998/99	1999/00	2000/01	% increase over 1996/97
Effective from		21-5-96	4-01-97	12-01-98	1-2-2000	1-2-2001	
Category		P/U	P/U	P/U	P/U		
Domestic	100	94	106	130	130	150	59.57%
Domestic	200	122	142	145	155	185	51.64%
Commercial	100	210	235	290	300	340	61.90%
Commercial	200	250	280	320	330	370	48.00%
Irrigation	200	65	80	100	100	120	84.62%
Small Scale Inds.	20% LF	165	205	262.54	306.73	346.73	110.14%
Med. Industries	30% LF	230	265	285.37	295.37	343.00	49.13%
Public Institutions	40% LF	175	200	259.03	289.03	317.12	81.21%
Public Lighting	1000 U/M	155	200	254.13	298.26	325.48	109.99%
Pub. Water Works	50% LF(LT)	210.88	270	285.22	304.35	344.35	63.29%
Pub. Water Works	50% LF(HT)	215.00	290.88	320.88	330.88	360.88	67.85%
General Purpose	40% LF	281.10	306.10	336.10	346.10	376.10	33.80%
Large Industries	70% LF(HT)	248.49	273.49	294.92	293.49	310.63	25.01%
Large Industries	70% LF(EHT)	273.49	293.49	283.49	280.63	297.77	8.88%
Pow. Int. Industries	80% LF(HT)	268.05	288.05	283.05	281.80	293.05	9.33%
Pow. Int. Industries	80% LF(EHT)	268.05	288.05	270.55	268.05	279.30	4.20%
Heavy Industries	70% LF	273.49	293.49	283.49	280.63	297.77	8.88%
Ministeel	40% LF	238.10	276.10	316.10	336.10	366.10	53.76%
Rly. Traction	40% LF	306.10	326.10	326.10	336.10	366.10	19.60%
Overall % Rise		17.00%	10.33%	9.30%	3.92%	10.23%	
				CESCO	4.00%	11.59%	
				WESCO	4.00%	9.60%	
				NESCO	3.00%	8.30%	
				SOUTHCO	5.00%	11.27%	

The tariff order of 2000/01 will be effective till July 2002.

Power supply position

The power supply position in the state in terms of peaking power and energy availability has improved compared to FY 1997. Data compiled by CEA shows that peaking shortages have come down from 18% to 11.8% and energy shortage from 3% to 0.1% during the period from 1996/97 to 2001/02. In fact, the state had a marginal energy surplus during 1998/01 and in peaking during 2000/01. The shortages during 2002/03 (April-May 2002) were 10.2% in peaking and 2.2% in energy. There was enforced regulation in power supply in the state during this year due to non-payment of dues to the National Thermal Power Corporation.

T&D losses

The audited statement of accounts of the OSEB had shown T&D losses in the state at 23.81% in 1994/95 and 46.94 in 1995/96. However, these losses had an element of estimate as the number of consumers was not metered (billed on flat-rate basis). Further there were also non-functional/defective meters. The World Bank consultants therefore took up some sample studies at the time of preparation of the Staff Appraisal Report (SAR) in 1996. According to this the losses were to be around 39.5% in 1996/97 and these were to be brought down to 21.7% in 2001/02. The IM also mentioned similar losses for 1996/97 and it was indicated that the technical losses at the distribution level were 15.7% (below EHT level) and around 5.8% at the EHT level. The rest, approximately 18%, were commercial losses. Figure 6 shows how the distribution losses varied in the four DISTCOs, corresponding values projected in the IM and those approved by the OERC are also shown alongside.

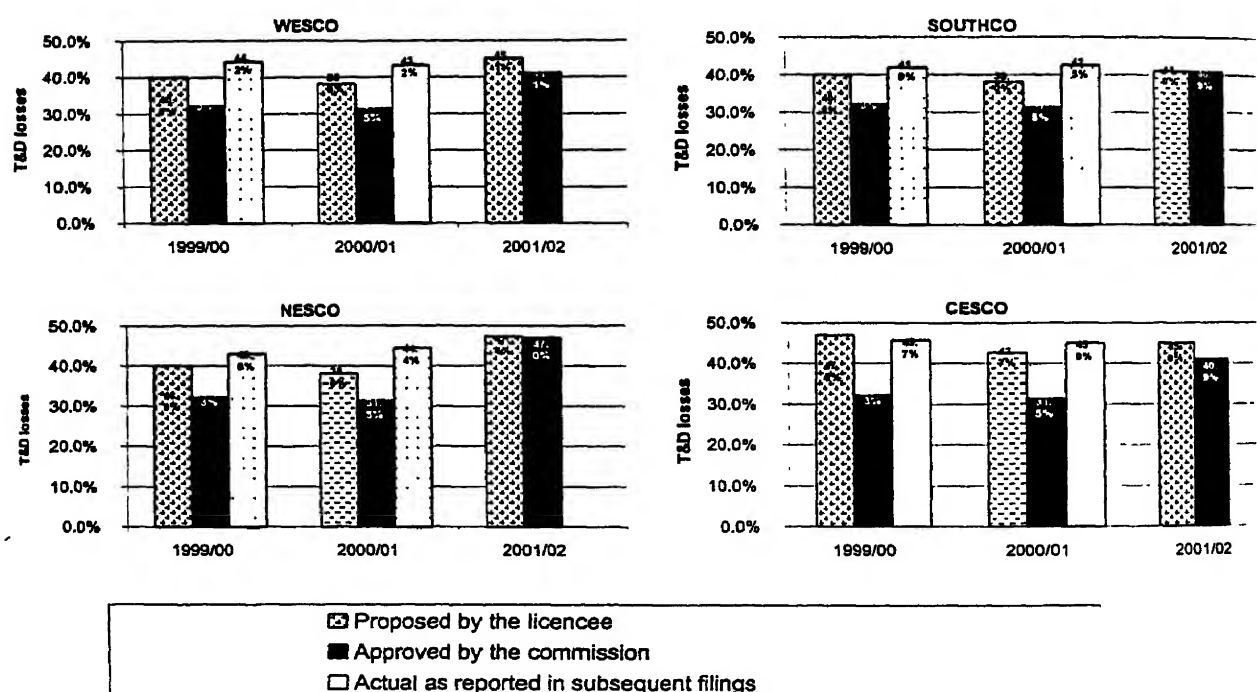


Figure 6: Proposed/approved and actual T&D losses

Commercial losses, (which arise from the unauthorized use of electricity through hooking, tampering of meters, etc.) constituted the bulk of these losses. The DISTCOs were making special efforts to bring them down. However in doing so they faced obstructions from anti-social elements including attacks on their officers and personnel engaged in enforcement. Support from law and order enforcing agencies of the government assumed importance in this context. Taking note of this and also to address the other concerns of consumers, the

GoO constituted district level Advisory-cum-Coordination Committees (May 2001). The composition of these committees and the range of issues they were to address are given in the box below. The committees were to meet every month and promptly submit the proceedings, duly approved by the Collector, to the Energy Department of the government. The Kanungo Committee while reviewing this set up was of the opinion that the district level committees may be substituted by two-tier forums, one at the district level and the other at DISTCO level.

Box 4 Composition of Advisory- cum -Coordination Committee

Collector	Chairman
MPs of the district or their nominees	Member
MLA of the district	Member
Superintendent of police	Member
Executive Engineer, R W SS	Member
Executive Engineer, PHD	Member
Executive officer of NAC/municipal bodies	Member
PODRDA	Member
Representative of Orissa Lift Irrigation Corporation	Member
Representative of Orissa Agro Industries Corporation	Member
M D Nominee of the distribution company	Member
Below the rank of superintending engineer	

Range of issues:

Rural electrification
 Energization of L T points – Private /OLIC
 Grant of new connections
 Replacement/upgradation of transformers
 Removal of low voltage problems
 Collection of arrears in Electricity Duty of government
 Removal of low voltage problems
 Installation of meters
 Conducting consumer/load census
 Taking action in respect of meter tampering
 Taking action in respect of theft of conductors
 Regularizing unauthorized connections
 Law and order problems faced by the distribution companies
 Creating Awareness in the society
 Any other socially relevant programme concerning the department of energy

Metering

Tables 9A and B show the status of metering in the four DISTCOs. The base of metering, the procurement mechanism, and the quality of meters were a subject of criticism.

Table 9A Status of metering (FY 2000/01)

	No of consumers	No of working meters	No of defective meters	No of connections without meter
CESCO	656918	261354 (39.78%)	263692 (40.14%)	131872 (20.07%)
NESCO	311804	146839 (47.09%)	99262 (31.83%)	65703 (21.07%)
WESCO	343962	209471 (60.90%)	58881 (17.12%)	75600 (21.98%)
SOUTHCO	381970	260585 (68.22%)	95588 (25.03%)	25797 (6.75%)

Table 9B Status of metering (FY 2001/02)

	No of consumers	No of working meters	No of defective meters	No of connections without meter
CESCO	692380	395694 (57.15%)	196522 (28.38%)	100164 (14.47%)
NESCO	374067	172237 (46.04%)	98940 (26.45%)	102890 (27.51%)
WESCO	379268	263210 (69.4%)	45637 (12.03%)	70421 (18.57%)
SOUTHCO	411596	296814 (72.11%)	86292 (20.97%)	28490 (6.92%)

Source. OERC. The figures in parentheses represent the percentage share with respect to total number of consumers

Quality of service

Annexure D presents some parameters of the quality of service as reported by the licencees to the OERC under affidavit for the year 1999/00 and 2000/01. While these have not been verified by any independent agency, the public have not made any representations against the authenticity of these numbers as published in local newspapers.

Impact of the 1999 cyclones on DISTCOs

Orissa was ravaged by two consecutive cyclones – one on 17.10.99 and the super-cyclone on 29-30.10.99. In the first cyclone the lines and sub-stations of SOUTHCO were severely damaged. The super-cyclone resulted in severe damage to the lines and sub-stations of CESCO and NESCO. The damage covered 12 districts.

The funds required to take up the barest minimum restoration work were estimated at 105.72 crore rupees. It was expected that this sum would be available as a grant from the GoO and/or from GoI, but, no such funds could be made available. A proposal to utilize the funds available from the unutilized portion of the existing World Bank loan amount earmarked for activities such as like Demand Side Management (DSM), and procurement of meters from the existing World Bank Loan could not also be implemented since the on-lending of the loan was not finalized. As a result the three DISTCOs had to incur unexpected expenditures when they had just entered into the business.

The OERC had authorized the DISTCOs to go ahead with the restoration work and divert stores from other schemes to procure 50% of materials as per their overall assessment. It was also monitoring the restoration works; the Commission had appointed an ex-chief electrical inspector to assess the damage. Based on this the allowable expenditure was decided. In the case of CESCO for example, the OERC authorized an expenditure of 52.719 crore rupees as against an initial proposal of 129.57 crores rupees by DISTCO. While adding this amount to the asset base, the Commission also ensured that cost of the old replaced assets was netted out so as to ensure that the consumers were not charged for assets that were not careful. In the case of CESCO the net increase in asset base was 16.61 crore rupees.

Changes in CESCO management

The functioning of CESCO after it was taken over by the AES consortium in September 1999 was beset with problems right from the beginning. These were organizational, financial, and contractual by nature. Finally in August 2001, the OERC revoked the licence and vested the management of the DISTCO in a CEO (chief executive officer) deputed by the government. The status quo continues. The events leading to the exit of the AES consortium are presented in Annexure E.

Rural electrification

Rural electrification is a socio-politically sensitive and relevant issue in the operation of any distribution company. However, these electrification schemes are normally not economically attractive in view of the capital investments, low load density, poor paying capacity of the consumers etc. According to a study by XIM, Bhubaneswar (OERC 2002) typical economics for rural consumers in Orissa are characterized by a billing/input ratio of 35% and a collection/billing ratio of 25%. In other words for every one hundred rupees worth of input the utility was collecting only 8.75 rupees.

In the erstwhile set up these programme were being supported by government subsidies and soft loans. The OSEB had a dedicated wing under one chief engineer to look after rural electrification programme. When the OSEB was restructured and DISTCOs were privatized, the rural electrification wing was disbanded and the focus on rural electrification was lost, though the programme was not given up. The super cyclone and the non-payment of the assured capital subsidy to DISTCOs by the government also contributed to the slackening of

interest in taking up new programme. Table 10 presents some statistics on rural electrification during the past few years:

Table 10 Progress in rural electrification

	1997/98	1998/99	1999/2000	2000/01
Number of villages electrified	800	817	748	42
Pumpsets energized	1903	1312	1167	99

The recent tariff filings before the OERC show that the DISTCOs have practically no schemes on hand related to rural electrification except those under the PMGY (Prime Minister 's Gramina Yojanna).

The Kanungo Committee (2001) has noted that MPs and MLAs were willing to provide funds under local area development schemes for rural electrification works. However, this had not made headway due to disagreements on departmental charges payable to DISTCO. The Committee suggested that a Rural Electrification Planning Organization (REPO) be set up under the GoO to provide focus and direction to the rural electrification programme, have specific projects prepared of posing to funding agencies and oversee utilization of the funds procured. This organization should have under it four Rural Electrification Planning Units (REPU), one for each DISTCO with which it would work in close coordination. These units should be responsible for drawing up detailed schemes of rural electrification, monitoring the execution of the schemes by the concerned DISTCO and reporting completion of the projects and the expenditure incurred thereon to the Collector of the District and the REPO. On the basis of the Collector's certificate the Government should promptly settle the subsidy payment admissible to a DISTCO. The scheme should be prepared not only to provide domestic lighting but also to meet the requirements of agricultural pumping and agro-processing. They should also be prioritized in consultation with the collector of the concerned district.

In the mean time, alternative forms of intervention had also been tried out to improve power supply to the rural areas. One such initiative was taken by BSES though the formation of the Village Electricity Committees (VEC) or micro privatization. This was conceived by XIM Bhubaneshwar (OERC 2002) and started as a pilot project in August 1999. It now spans over 4900 villages. The role of the VEC includes meter reading, distribution of bills, complaint handling, and collection camp co-ordination, resolving of disputes, agreements on installments, dissemination of information, etc. Eventually it is proposed that independent franchisees be appointed on commercial terms who will handle all interaction with VECs.

Reports till date show that with this set up, billing and collection as well as quality of service has improved in the project areas. For example, records of WESCO as per its tariff filing before the OERC (GRIDCO 1999) show that micro privatization has provided the following benefits.

- Over 1100 long pending consumer's complaints were resolved
- consumers were able to avail connections

- Consumers no longer had to go out of the village for electricity-related problems
- Bill distribution, meter reading and cash collection have become more streamlined/improved
- Large scale metering has brought about reduction in input and an improvement in voltage. Distribution transformers are thereby less loaded and distribution transformer failures are reduced.

9 Views on the outcome of reforms

The outcome of reforms in Orissa's power sector have been commented upon in a number of reports and articles. While some view it as a failure, other do not totally subscribe to this. It is a fact however that the GRIDCO and DISTCOs are continuing to incur losses and the sector has not been able to realize a turn around. Quality of supply and service has also not gone up to the expected levels.

There was a prolonged debate on this topic in the Orissa Legislative Assembly during early 2001, in which a large number of legislators participated. Following this the GoO constituted a six-member committee of independent experts under Sri Sovan Kanungo. This committee in its report submitted to the government in October 2001 has made some wide-ranging comments and recommendations (Kanungo Committee Report 2001). In addition, the Montek Singh Ahluwalia Committee in its report on SEB reforms (MoP 2001) submitted to the Gol in May 2001 had made certain observations on the outcome of reforms. The OERC has commented on the performance of the sector in its tariff order for FY 2001/02. Some of the main issues brought out in these documents are mentioned below.

- Estimation of the initial T&D losses and the targets for reduction in the 1996 SAR of the World Bank were unrealistic. This has been acknowledged in the Bank's Aid Memoir of 31 October 1998, which says "During Project implementation, once much more detailed information became available from RIAP and related work, it turned out that the starting point, the 1996 base figure was much higher, of the order of about 52-53% for OSEB's last year of operation in 1995-96 and about 50% for GRIDCO's first year of operations. The latter figure is confirmed in GRIDCO's audit report. Given that we so severely underestimated GRIDCO's system losses in 1996 and on that basis set unachievable performance targets under Ln. 4014-IN in May 1996, the Regulatory Commission in its March 1997 Tariff Order (which required GRIDCO to achieve 35% system loss level for 1997-98, in line with the original 1996 Bank estimates quoted above), it is not surprising and in fact unavoidable that GRIDCO's financial performance is well below agreed targets"
- The assumption in the SAR on the growth in demand for power in the state was highly ambitious, not only in terms of totals but also in the composition. The demand for industrial power (EHT) which, subsidizes domestic demand (LT supply), was grossly under realized while domestic and commercial demand with high losses grew fast. The preference for captive generation on part of EHT consumers with rising tariffs was not anticipated.
- On the collection front, the assumption in the SAR was that 100% of the billings would be collected from the year 1997/98 onwards but this was hard to achieve.
- Services of local consultants as well as highly rated consulting firms of international repute were used extensively at a high cost (cover 300 crore rupees) to prepare the blueprint of reform. High cost consulting services were also retained to assist the utilities in developing internal systems of operation management, financial control, technical services, contract management, project implementation, etc. However, judging by the fate of the reform and the present state of the utilities, this has belied the expectations.

- The private promoters of the DISTCOs neither brought superior management skills nor did they arrange financial support even by way of working capital for the companies, which were in dire need of capital, working capital in particular.
- There is no evidence of introduction of any innovative practices in the management of the DISTCOs except for the experiment of involving village communities in streamlining the power supply in rural areas.
- The power purchase model of SBM had inherent limitations in promoting competition.
- The process of tariff fixation on a year-to-year basis using a cost plus approach has excessive regulatory uncertainty. A multi-year framework is necessary.
- Many non-paying customers enjoy political patronage. Government agencies such as police stations, schools, public hospitals, etc. do not routinely pay their bills due to their own financial difficulties.
- Rural electrification has suffered as a result of reforms.
- The cyclones of 1999 were a set back to the efforts of the privatized DISTCOs in achieving turnaround.
- The assets were over-valued. This should have been kept in abeyance till the systems were brought to balance.
- GoO should allow a moratorium on debt servicing to the state except for the amounts in respect of loans from the World Bank.

A judgemental analysis of the above is left to the reader.

The distribution-privatization debate is still on as other states are reforming their power sector with a focus on improving the performance of distribution. The just concluded privatization of DVB differed in many respects (asset valuation, reckoning of losses, criteria for selection of bidders, government funds for the transition period to subsidise power purchase etc.). The following issues are of topical interest:

- Alternatives to privatization
- Efforts needed to make a utility privatizable
- Big bang approach vs sequential approach to privatization
- Alternative models for privatization of distribution
- Role of cooperatives and panchayats in rural electrification
- Enactment of anti-theft law
- Regulator's role in privatization
- Promotion of competition.

Annexure A

Provisional opening balance sheet of DISTCOs as on 31 March 1999 (figures in lakh rupees)

	CESCO	NESCO	WESCO	SOUTHCO
Sources of Fund				
Share capital authorized	72,72 (7,27,20,000 equity shares of Rs 10 each)	65,91 (6,59,10,000 equity shares of Rs. 10 each issued, subscribed and paid up)	48,65 (4,86,50,000 equity shares of Rs 10 each)	3766 (3,76,600 equity shares of Rs 10 each issued, subscribed and paid up)
Issued, subscribed and paid up	72,72 (7,27,20,000 equity shares of Rs10 each)	65,91 (6,59,10,100 equity shares of Rs 10 each)	48,65 (4,86,50,000 equity shares of Rs 10 each)	3766 (3,76,60,000 equity shares of Rs 10 each)
Retained earnings	0	0	0	0
Staff Welfare Board	2	1	1	1
Contingencies reserve	119	90	93	83
Total – shareholders fund	73,93	6682	4959	3850
Consumer's contribution	65,24	4904	4978	4514
Unsecured loan				
Project related liabilities				
World Bank Loan	55,31	32,41	2870	2453
Other long term debt	16,126	1,0484	11696	10566
Total unsecured loan	21657	1,37,25	14566	13019
Current liabilities				
Accounts payable	9032	53,70	7038	2913
Other current liabilities	12418	41,32	2663	4326
Consumer security deposit	1777	27,70	4650	1880
Total current liabilities	23227	1,22,72	14351	9119
TOTAL SOURCES	58801	3,75,83	38854	30502
Application of fund				
FIXED ASSETS				
Gross block	3,60,43	2,63,39	26716	23382
Less: accumulated depreciation	67,66	53,32	5534	4920
Net block	2,92,77	2,10,07	21182	18462
Capital works in progress	61,79	42,14	3229	2838
Total fixed assets	3,54,56	2,52,21	24411	21300
Investments	118	90	92	83
CURRENT ASSETS				
Gross receivables for sale of power	3,54,27	1,28,68	21496	15276
Less provision for bad and doubtful debts	1,82,46	71,99	10428	9007
Net receivables for sale of power	1,71,81	56,69	11068	6269
Gross store and spares	32,89	24,09	2028	1544
Less provision for obsolete spares	7,03	1,67	790	682
Net stores and spares	25,86	22,42	1238	862
Cash and bank balances	14,37	10,00	1000	1000
Other receivables	20,23	33,61	1044	988
Total current assets	2,32,27	1,22,72	14351	9119
TOTAL APPLICATIONS	5,88,01	3,75,83	38854	30502

Source : Department of Energy, Government of Orissa Notification dated 25th November 1998

Annexure B**Balance sheet of DISTCOs (based on management accounts)****CESCO**

	As on 31.03.2002
SOURCE OF FUNDS	7272
Shareholder's fund	7272
Share capital	
Reserves and surplus	49446.71
Loan funds	49446.71
Secured loans	
Unsecured loans	
Other funds	
Consumer's security deposits	3440.28
Capital contributions from consumers	8113.09
Capital reserves	251.00
Total	68523.08
APPLICATION OF FUNDS	
Fixed assets	47022.09
Gross block	48660.30
Less: Accumulated depreciation	15241.85
Net block	33418.45
Capital work in progress	13485.64
Investments	118.00
Current assets, loans and advances	
Sundry debtors (net) against sale of power	60715.35
Other receivable (net)	1675.00
Inventories or stocks (net)	2341.51
Cash and bank balances	3938.64
Loans and advances	
Less: Current liabilities and provisions	106139.33
Current liabilities (accounts payable)	106139.33
Provisions	-
Profit and loss account debit balance	58969.81
Net current assets	21500.98
Total application of funds	68523.07
Miscellaneous expenditure to the extent not written off or adjusted	

NESCO

As on 31.03.2002

SOURCE OF FUNDS

Shareholder's fund	
Share capital	6591.00
Reserves and surplus	304.87
Loan funds	
Secured loans	
Unsecured loans	38152.10
Other funds	
Consumer's security deposits	4060.96
Capital contributions from consumers	5182.24
Total	54291.16

APPLICATION OF FUNDS

Fixed assets	
Gross block	36379.89
Less: accumulated depreciation	11674.61
Net block	24705.28
Capital work in progress	2390.94
Total CWIP	2390.94
Investments	
Current assets, loans and advances	
Sundry debtors	19656.29
Inventory	1488.46
Cash and bank balances	953.80
Loans and advances	241.48
Less: Current Liabilities and provisions	
Accounts payable	24527.99
Current liabilities	9388.60
Other current liabilities	-18518.69
Provisions	16458.41
Net current assets	-9516.28
Miscellaneous expenditure to the extent not written off or adjusted	
Profit and loss account debit balance	36711.23
Total application	54291.16

WESCO

As on 31.03.2002

SOURCE OF FUNDS

Shareholder's fund	
Share capital	4865.00
Reserves and surplus	341.23
Loan funds	
Secured loans	
Unsecured loans	33618.18
Other funds	
Consumer's security deposits	6673.38
Capital contributions from consumers	5300.59
Total	50798.38

APPLICATION OF FUNDS

Fixed assets	
Gross block	38317.35
Less: Accumulated depreciation	12632.82
Net block	25684.53
Capital work in progress	
Capital stock	
Total CWIP	4784.68
Investments	0.00
Current assets, loans and advances	
Sundry debtors	29991.59
Inventory	1825.00
Cash and bank balances	767.02
Loans and advances	614.97
Less: Current liabilities and provisions	
Accounts payable	30701.72
Current liabilities	8502.81
Net current assets	6005.95
Miscellaneous expenditure to the extent not written off or adjusted	
Profit and loss account debit balance	26335.13
Total application	50798.39

SOUTHCO

As on 31.03.2001

SOURCE OF FUNDS	
Shareholder's fund	
Share capital	3766.00
Reserves and surplus	168.76
Loan funds	
Secured loans	
Unsecured loans	17047.66
12.5% power bond to GRIDCO	13812.50
Consumer's security deposits	2795.35
Capital contribution from consumers	4721.09
Total	42311.36
APPLICATION OF FUNDS	
Fixed assets	
Gross block	29529.92
Less: Accumulated depreciation	8465.51
Net block	21064.42
Capital work in progress	1600.74
Capital stock	
Total CWIP	1600.74
Investments	0.00
Current assets, loans and advances	
Sundry debtors	14818.45
Inventory	
i) Capital	1476.29
ii) O&M	770.25
Cash and bank balances	697.50
Loans and advances	17317.78

Less: Current liabilities and provisions	
Accounts payable	7134.13
Current liabilities	8055.83
Provision for pension, gratuity and leave encashment	17525.11
Long/short term working capital loan	0.00
Net current assets	2365.21
Miscellaneous expenditure to the extent not written off or adjusted	
Profit and loss Account debit balance	17280.99
Total application	42311.36

Annexure C

Zone wise statistics as given in the Information Memorandum

Western Zone

	Actual/Forecast			Projections		
	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02
Input to the zone (MU)	2471	2582	2843	3191	3429	3604
Distribution technical loss (MU)	364	441	492	535	535	524
Energy consumed (MU)	2106	2140	2351	2656	2893	3080
Distribution non-technical loss (MU)	623	583	537	455	293	152
Energy billed (MU)	1483	1557	1814	2201	2601	2928
Distribution technical Loss (%)	14.8%	17.1%	17.3%	16.8%	15.6%	14.5%
Distribution non-technical loss (%)	25.2%	22.6%	18.9%	14.2%	8.5%	4.2%
Total loss (%)	40.0%	39.7%	36.2%	31.0%	24.1%	18.8%

Energy sold by consumer category (MU)

Consumer category	Actual/Forecast			Projections		
	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02
Domestic	323	303	533	543	554	570
Commercial	84	81	96	108	133	153
Industrial LT	65	74	71	98	120	139
Industrial HT	801	878	879	1162	1434	1651
Public lighting	8	9	9	12	15	17
Public water works	16	21	16	28	34	40
Railway traction	98	92	96	122	151	174
Irrigation	41	45	51	59	73	84
Non- industrial	47	53	65	70	87	100
Total	1483	1557	1814	2201	2601	2928

Southern Zone

	Actual/Forecast			Projections		
	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02
Input to the zone (MU)	1470	1457	1580	1737	2130	2274
Distribution technical Loss (MU)	228	281	275	293	335	333
Energy consumed (MU)	1242	1176	1305	1444	1795	1941
Distribution non-technical loss (MU)	384	294	202	142	90	96
Energy billed (MU)	857	881	1103	1303	1705	1845
Distribution technical loss (%)	15.5%	19.3%	17.4%	16.9%	15.7%	14.6%
Distribution non-technical loss (%)	26.1%	20.2%	12.8%	8.1%	4.2%	4.2%
Total loss (%)	41.7%	39.5%	30.2%	25.0%	19.9%	18.9%

Energy sold by consumer category (MU)

Consumer category	Actual/Forecast			Projections		
	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02
Domestic	261	321	417	453	514	569
Commercial	57	76	65	107	121	134
Industrial LT	47	48	50	68	77	86
Industrial HT	280	229	270	322	611	650
Public lighting	6	6	6	9	10	11
Public water works	19	19	20	27	31	34
Railway traction	75	72	73	102	116	128
Irrigation	37	39	47	55	62	69
Non- industrial	76	71	157	159	162	165
Total	857	882	1103	1303	1705	1845

North Eastern Zone

	Actual/Forecast			Projections		
	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02
Input to the zone (MU)	1770	2008	2170	3551	3697	4684
Distribution technical loss (MU)	329	394	408	649	633	751
Energy consumed (MU)	1441	1615	1762	2902	3065	3933
Distribution non-technical loss (MU)	527	466	391	474	282	198
Energy billed (MU)	915	1149	1371	2428	2782	3735
Distribution technical loss (%)	18.6%	19.6%	18.8%	18.3%	17.1%	16.0%
Distribution non-technical loss (%)	29.8%	23.2%	18.0%	13.3%	7.6%	4.2%
Total loss (%)	48.3%	42.8%	36.8%	31.6%	24.7%	20.3%

Energy sold by consumer category (MU)

Consumer category	Actual/Forecast			Projections		
	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02
Domestic	202	231	313	315	317	393
Commercial	42	47	48	49	59	79
Industrial LT	49	50	54	55	64	85
Industrial HT	539	544	683	1733	2036	2828
Public lighting	4	5	5	5	7	9
Public water works	6	7	6	6	9	12
Railway traction	12	12	11	11	15	20
Irrigation	42	57	53	54	73	98
Non- industrial	18	21	24	24	27	37
EOU sales to NTPC power at cost	-	174	174	174	174	174
Total	915	1149	1371	2428	2782	3735

Central Zone

	Actual/Forecast			Projections		
	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02
Input to the zone (MU)	3354	3597	3649	4036	4287	4494
Distribution technical loss (MU)	673	608	628	673	665	649
Energy consumed (MU)	2680	2989	3022	3363	3622	3845
Distribution non-technical loss (MU)	1059	1137	931	841	649	325
Energy billed (MU)	1622	1852	2091	2522	2973	3521
Distribution technical loss (%)	20.1%	16.9%	17.2%	16.7%	15.5%	14.4%
Distribution non-technical loss (%)	31.6%	31.6%	25.5%	20.8%	15.1%	7.2%
Total loss (%)	51.6%	48.5%	42.7%	37.5%	30.6%	21.7%

Energy sold by consumer category (MU)

Consumer category	Actual/Forecast			Projections		
	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02
Domestic	606	702	912	930	1057	1267
Commercial	127	134	145	170	201	241
Industrial LT	96	92	105	117	139	166
Industrial HT	607	674	680	855	1072	1274
Public lighting	10	13	11	16	19	23
Public water works	61	46	60	59	70	84
Railway traction	-	-	-	-	-	-
Irrigation	39	50	49	63	75	90
Non- industrial	76	116	105	147	175	210
EOU sales to NTPC power at cost	-	25	25	165	765	165
Total	1622	1851	2091	2522	2973	3521

Annexure D

Quality of service in the DISTCOs

Sl No	Item of OERC overall performance	Achievement* (1999/2000; 2000/01)			
		Minimum standard	CESCO	NESCO	SOUTHCO WESCO
1	Process and provide new connections to domestic consumer within 40 working days of date of application	85% of feasible cases	98%; 97%	99% ; 99.64%	98% ; 99%
2	Process and provide new connections to commercial consumer within 40 working days of date of application	85% of the feasible cases	97.40%; 98%	99% ; 99.64%	98% ; 99%
3	Process and provide new connections to commercial agricultural pumps within 60 working days of date of application	85% of the feasible cases	88.9% ; 94%	68.8% ; 26.3%	100% ; 88%
4	Process and provide new connections to industrial consumers with demand upto 22 KVA within 90 working days	85% of the feasible cases	85.80%; 95%	NA	100%
5	Reconnect supply of domestic/commercial consumers if disconnected for non-payment of electricity charges as billed within 24 hours of production of proof of payment	80% of the feasible cases	49.20%; 71%	83% ; 84.8%	100% ; 100%
6	Reconnect supply of agricultural pumps if disconnected for non-payment of electricity charges as billed, within 48 hours of production of proof of payment	80% of the cases	50% ; 70%	83% ; 84.8%	100% ; 100%
7	Reconnect supply of industrial consumers supplied at 230/400 V, if disconnected for non-payment of electricity charges as billed, within 24 hours of production of proof of payment	80% of the cases	81.40%; 86%	83% ; 84.8%	100% ; 100%
8	Installation of correct meter within a year	40% of cases of unmetered connection	13.67%; 22%	56% ; 25.1%	19% ; 4%
9	Replacement of faulty meters where meters are installed	40%	29% ; 12%	12% ; 25.1%	30% ; 39%
10	Arrange to test the meter belonging to the consumer within 15 working days of receipt of necessary testing fees from the consumers	60% of the cases	97.60% ; 80%	97.50% ; 98.8%	100% ; 100%

Note: * Quality of Service in DISTCOs in 2000-01

Exit of AES consortium from CESCO management

Soon after privatization, the CESCO management created a separate management cadre with conditions of services very much different from those in the CESCO Officers Service Regulation. These officers were given substantially higher salaries and perks and also the discretion to give large bonuses, reduce emoluments, and terminate services. Most of those recruited to this cadre (55 out of 72) were outsiders and some of them were just in their early thirties with very little distribution experience. Existing CESCO officers (transferred from GRIDCO) with long years of experience were to work under them. The morale and discipline of the employees suffered in the process.

CESCO also defaulted in meeting some contractual obligations. For example, in August 2000, they exhausted the cash accommodation of 174 crore rupees provided by GRIDCO; but failed to bring additional funds on their own to meet further shortfalls.

GRIDCO and CESCO had signed an escrow agreement on 11.07.2000 whereby any cash received towards payment of any receivables of CESCO were to be deposited by CESCO in the CESCO escrow account to be maintained by the escrow agent at the Bhubaneswar branch within 48 hours and were not to be used for any other purpose. Operationalisation of this escrow mechanism as per this agreement was also not achieved and CESCO started defaulting payments to GRIDCO for power purchase. As a result GRIDCO started defaulting in its escrow obligation to OPGC. This in turn led to OPGC reducing power supply to GRIDCO. The government tried to sort out the matter through discussions but did not succeed. GRIDCO then obtained an interim order from the High Court restraining OPGC from imposing power cuts. GRIDCO also moved the OERC in the matter and the latter directed CESCO in April 2001 (Case No.31/2001), to abide by their contractual commitments. Seeing little progress GRIDCO again approached the OERC in July 2001. When this case was being heard, GRIDCO got information that CESCO had bypassed the escrow mechanism by diverting 18.59 crore rupees. The OERC was then moved requesting criminal action against CESCO. At that stage, the government intervened and held discussions with GRIDCO and CESCO. Thereafter GRIDCO decided not to pursue the case further and petitioned OERC accordingly. OERC took a lenient view and closed the case in July 2001. The Commission only warned that if any breach of the contract entered into between GRIDCO and CESCO was brought to the Commission's notice in future, then it would be compelled to take penal action against CESCO.

Around this time AES was also having some problems with the OPGC where they had a 49% share-holding. The employee unrest there had led the GoO to invoke provisions of the Orissa Essential Services (Maintenance) Act, 1998 prohibiting strikes in all establishments in the state dealing with generation, transmission, and distribution of electricity. AES also could not increase its share holding in OPGC by another 2% as was proposed while taking over CESCO.

All these events led to the consortium losing interest in CESCO and in July 2001 the AES sought GRIDCO's permission to sell its shares either to a third partner or at a negotiated price to GRIDCO. This was against the Shareholders Agreement (which required a minimum lock-in period of 5 years before disposing shares) and hence was not agreed to. The chairman of AES nevertheless made it clear to the government that they were not interested in continuing with the management of CESCO. This was followed by the resignation of the managing director and other functional directors of CESCO in July 2001. They were replaced by a technical director and four other non-executive directors; but this team had no instructions to operate bank accounts. In-house billing and collection were also affected since the corporate offices were locked up. The new MD was also replaced in September 2001.

In the mean time the employees of CESCO started getting restive since the CESCO board refused to make any provision for paying salaries. The system restoration work that was in progress following heavy rains and floods in July 2001 also suffered. The GRIDCO Board feared that if this situation were allowed to continue it would result in disruption of power supplies to the CESCO area, and approached OERC. In August 2001, CESCO was also alleged to have contravened certain conditions and requirements of the Orissa Distribution and Retail Supply Licence, 1999. These included a reluctance by CESCO to take steps for the procurement of adequate power, failing to take prompt and effective steps in the matter of billing and collection of revenue, defaulting in disbursement of the pay and allowances of its employees, and failing to repair and restore distribution system and other assets damaged by the super cyclone and floods within its licenced area.

OERC in its order of 24 August 2001 gave directions for vesting the management of CESCO in a CEO (Chief Executive Officer), and requested the GoO to forward a list of suitable names from which one would be selected by the Commission to take over the management and control of CESCO. Accordingly, GoO nominated Sri Suresh Chandra Mohapatra, IAS and Sri Pradeep Jena, IAS. The Commission selected Mohapatra and directed that with immediate effect the management and control of the undertaking of CESCO with all its assets, interests and rights would vest with Shri Suresh Chandra Mohapatra who would function under the supervision of the OERC and would send periodical reports to the Commission as it directs.

International experience in distribution privatization

Electric utilities in most developed and developing countries are traditionally government owned. In USA utilities were largely private investor-owned. The electricity supply business was considered a natural monopoly and therefore kept primarily in the public sector. The institution of independent regulatory commissions was evolved in the early part of the twentieth century in USA to regulate private investor-owned utilities. The restructuring of utilities followed by privatization and/or introduction of gradual or phased open access in distribution is a relatively recent phenomenon, that began in the late 1980s.

Several countries have undertaken reforms and privatization. The underlying reasons for change have been different in different countries while some trends have been common. The major drivers for change in developed countries, such as the UK and USA, have generally been changed political and economic thinking. It was felt that objectives of efficiency, lower price levels and better service to the consumer could be achieved by treating generation as an activity that could be undertaken competitively and therefore left to market forces. The wires business of transmission and distribution only need to be seen as naturally monopolistic.

Accordingly, the consumers would benefit through efficiency gains from deregulation and competition in generation and supply and the network for transmission and distribution should provide non-discriminatory open access with the transmission and distribution tariffs regulated.

UK was a pioneer in unbundling its government-owned vertically integrated utility and privatizing it and introducing generation to continuous competition through a spot market and a power pool. In USA, which is a very large federal country, the situation varies across states. California attempted to replicate the UK approach. In developing countries such as Latin America and South East Asia poor performance and public sector financial constraints have been the drivers for change. While in developed countries, the availability and quality of supply was not an issue, developing countries were facing increasing demand supply gaps. Private sector investment was found necessary for upgrading existing system and for financing additional capacities. While the conditions prevailing in the power sector in Europe and USA were different from those in India, the Indian situation may be found to be closer to some of the Latin American and South East Asian countries.

There have been more than 70 electricity distribution privatizations over 1992/1999 of which about half have been in Latin America. An in-house survey from the IFC/WB estimated that during 1992/1999, 12 developing countries privatized their distribution in different forms through 74 transactions valued at 38 billion dollars.

PRIVATIZATION OF DISTRIBUTION NETWORKS 1992/99

Country	Number of sales	Dates	Total customers	Sale amount ($\times 10^6$ dollars)	Sale amount present value ($\times 10^6$ dollars)	Proceeds (PV) (\$mil)	Adjusted proceeds (PV) ($\times 10^6$ dollars)	Adjusted enterprise value (PV)
Argentina	18	Sep 92- Jun 98	6,416.00	2816.00	3134.00	3412.00	3097.00	4894.00
Brazil	17	Jul 95- Sept 98	26871.00	18141.00	19041.00	20784.00	20205.00	36780.00
Peru	9	Jul 94 – Nov 98	2066.00	604.00	665.00	665.00	665.00	1315.00
Hungary	6		4965.00	1100.00	1230.00	1230.00	1230.00	2618.00
Australia	5		1990.00	6257.00	6888.00	6888.00	6888.00	8224.00
India	4	Apr 99 –Sep 99	1320.00	37.00	38.00	1113.00	113.00	222.00
El Salvador	3	Jan 98	883.00	586.00	611.00	611.00	611.00	769.00
Colombia	3	May 97 – Aug 98	2890.00	1953.00	2041.00	2672.00	2672.00	4857.00
Bolivia	2	Aug 95 – Dec 95	397.00	116.00	128.00	142.00	142.00	144.00
Dominican Rep	2	Apr 99- Sep 99	812.000	321.000	325.00	349.00	349.00	698.00
Guatemala	2	Jul 98 –Jan 99	1114.00	621.00	638.00	689.00	689.00	861.00
Panama	2	Sep 98	454.00	302.00	309.00	309.00	309.00	606.00
Georgia	1	Nov 98	370.00	26.00	26.00	84.00	84.00	113.00
Totals	74	Sep 92- Sep 99	50549.00	35050.00	37950.00	37055.00	37055.00	62102.00

Further, another IFC/ World Bank (WB) study reports that energy losses in distribution significantly declined within 2–6 years following privatization in Argentina, Chile, and Peru. Accordingly, an increasing number of governments from the developing/developed countries are actively encouraging and seeking private sector participation in their power distribution operations.

As an example, we can look at the Argentinian experience, which has been accepted as being successful. By the late 1980s, the electricity sector in Argentina was confronted with severe supply and financial problems arising from an inadequate and confusing legal/institutional framework, poor tariff policies, heavy debt burdens, reliance on contribution of the federal (central) government, physical deterioration of facilities due to inadequate maintenance and upgradation, and lack of consistent planning.

The GoA (Government of Argentina) launched a substantial restructuring and privatization programme in 1991. Essential elements of the power sector reform included implementing tariffs necessary to recover costs, providing a new regulatory framework under which generation, transmission and distribution functions were separated and initiating privatization of state-owned agencies. The restructuring process in the country also saw the establishment of an independent regulatory body and finally the creation of a wholesale electricity market. Privatization commenced in 1992 with the sale of state-owned assets in generation and distribution. Most of the initial privatizations resulted in the private sector owning at least 51% of the assets, the GoA holding was reduced to less than 10% through further sale to international private players. Further, the bidding was done on the basis of multi-year T&D loss reduction.

A good example of a distribution company success story is Edenor, one of the three distribution companies initially privatized in the Buenos Aires area. Edenor has a service area of 4,400 km with a serviceable population of about 7 million people. The situation of the company at the time of takeover by private sector was dismal. Total energy losses were about 30% with frequent

power interruptions, a de-motivated workforce, an oversized payroll, widespread internal corruption, social and political problems with users in poor neighbourhoods (50, 000 families), and low customer satisfaction.

The private company initiated a change in the corporate culture of the organization by partial employee reduction after negotiations with the unions, inducting performance evaluations, implementing new systems (for administrations, billing, collection, customer management etc.) and tackling internal corruption strictly. A big challenge for the company was dealing with non-paying customers and illegal users in poor neighbourhoods. It successfully managed to change 'illegal users' 'to consumers'. This, coupled with an effective regulatory framework, ensured that the company could turn around its operations successfully.

Edenor managed to reduce energy losses from about 30% in 1992 to 11% in 1998. The total workforce was reduced from over 6,300 employees in 1992 to less than 3,000 in 1998. Operating costs were brought down by 50% in the same period. The frequency of interruptions decreased by more than 65% over five years.

It should be noted that although the market structure and regulatory framework in Argentina were well conceived and implemented, they were viewed with suspicion by the public in the initial years of the privatization programme in 1992/93. However, after the transition period had passed and positive results started showing, the mood turned positive. Also, selling off state assets in Argentina was not totally cost-free for the government. In order to enhance the success of the restructuring and privatization programme, the GoA agreed to retain some of the debt from the state assets. This debt associated with privatization was offset partially by the subsequent influx of foreign investment. Further, it should be assumed that the overall debt of the government would have been much higher without the privatization process, which reduced losses and brought about efficiency in the system.

Observations from international experience

The unbundling of generation, transmission, and distribution into separate entities is a general trend in most countries including several developing ones. Unbundling has helped introduce competition in various segments of the power industry and has facilitated the privatization process. Following privatization, in Argentina wholesale electricity prices fell about 60% from the pre-privatization level of 50 dollars per mega watt-hour in August 1992.

Considerable preparatory work needs to be carried out prior to reforms. Argentina had to attract foreign players since the poorly developed capital market did not present alternatives, given the size of the investments to be made by the private sector. Also, there was a shortage of domestic operators with enough experience and financial strength. Preparation was done in two areas viz. conceptualizing a dynamic approach for private sector participation and result-oriented marketing to potential entities. Business houses that could form viable individual commercial entities were identified. Detailed information on technical, commercial administrative, economic, and accounting aspects was prepared and incorporated in the tender documents. The whole process was guided by a philosophy of transparency, in order to satisfy the needs of public opinion, legislative requirements, and expectations of potential

investors. Investor uncertainty manifests itself as reduced asset valuations and bids. These countries have used the most effective way of reducing uncertainty, which is through information-sharing.

The degree of private sector participation varies across countries. Typically, the ownership in generation and distribution was transferred to private players in a phased manner through a reduction in government stake. Transmission had remained a monopoly in most countries, mainly in the public sector. A significant point to note is that South East Asian countries have not experienced the fundamental restructuring seen in Latin American and European countries. Generally, the pressure to expand generation capacity in order to improve availability of supply has meant that South East Asian countries have focussed on generation first and then on distribution. This has led to slower progress in the power sector as a whole, as in India.

The extent of competition also varies across countries. To regulate monopolies (including transmission companies, distribution companies having served area monopolies and for upcoming generation projects/companies), an independent regulator has always been seen as a necessity. In cases where there has been a stable consistent, credible, and independent regulatory framework, privatization has been very successful e.g. Argentina and Peru.

Countries which have addressed employee concerns better, have had a greater level of success with distribution privatization e.g. Hungary and Argentina. Governments have addressed this challenge in many ways. Some of the mechanisms that have been employed are training programmes, severance benefits, service contracts for organizing outsourcing arrangements with former employees, ownership programmes including the provision of shares at deep discounts, and the placement of privatization proceeds into a fund providing support for displaced workers.

International experience could at the most, serve as a guideline. In totality it may not be fully relevant as the conditions in India could be significantly different from those in these countries.

Source: Distribution Policy Committee Report, Ministry of Power, Government of India, March 2002

The Kanungo Committee Report: Summary of findings and recommendations

Encouraged by the Government of India, assisted by the World Bank, and supported with grants from the Government of UK (DFID), Orissa took the initiative and became the first state to reform its electricity industry. The Orissa Electricity Reform Act, setting out the basic framework of the reform, enacted in 1995 came into force from 1 April 1996. The principal objectives of the reform were the following;

- (a) Restructuring the electricity industry for rationalization of generation, transmission, distribution, and supply of electricity.
- (b) Development of the industry in an efficient, economic, and competitive manner.
- (c) To provide for avenues for participation in the industry of private entrepreneurs, attract private investment, and reduce the need for government funding of the electricity sector.
- (d) To improve the quality of service to the consumer.
- (e) To enhance operational efficiency and reduce losses.
- (f) To provide a transparent mechanism for development and regulation of the industry, including tariff fixation and dispute settlement, through an independent, statutory body; the Orissa Electricity Regulatory Commission.
- (g) To contribute to economic growth of the state by ensuring superior electricity supply.
- (h) To create opportunities for increasingly rewarding employment for technical personnel and providing a stable environment for career development in the electricity sector.

Objectives at (a),(c) and (f) seem to have been achieved satisfactorily but the others have yet to be realised.

OERC has done pioneering work in our country in the establishment of a regulatory mechanism for the electricity industry. The Reform Act which has given the Commission a wide mandate, requires it to act effectively and independently. OERC's working in the last few years, however, has not been free from problems. To avoid these, we make the following recommendations.

- 1 To ensure that the Commission is fully functional at all times, the government must appoint commissioners promptly. Action for filling up vacancies should start early so that recommendations of the selection committee are available to the government at least two weeks before the vacancy occurs. In the event an appointment or selection is stayed by a court, prompt action should be taken to have it vacated by moving a higher court or a larger bench. Further, no one should be considered for appointment unless

there is a clear possibility of his serving for five years. To attract persons of ability, integrity, and standing, wide publicity should be given while inviting nominations for commissioners.

2. Budgetary allocations for the Commission should be adequate. Ordinarily, the government should not apply any budgetary cuts as long as the amount proposed by the Commission is within the limit of the licence fees received. Accounting regulation for the Commission should be settled forthwith and budgeted outlays placed in a banking account at the disposal of the Commission for incurring expenditure in accordance with the accounting regulation, without further reference to the government.

3. The Commission should institute regular systems of monitoring to ensure that the prescribed standards of performance are actually adhered to in the industry.

4. The government and the Commission should have purposeful inter-action on a wide range of issues of monitoring, problem solving, planning and development of the state's power sector. For exchange of information and discussion on administrative matters of mutual interest, the government should interact with the Commission's secretary. There should also be a system of meetings with the Commissioners, at least once a year, taken at an appropriately high level to discuss and settle matters involving important issues of policy.

5. The reforms were conceptualized under the guidance of the World Bank and the road map for implementation was set out in its Staff Appraisal Report (SAR). The assumptions in the SAR of growth in the demand for power in the state was highly ambitious, in terms of totals and composition. The demand for industrial power (EHT supply) which, subsidises domestic demand (LT supply), was grossly underrealized while domestic and commercial demand with high losses grew fast. T&D losses which were excessively high, and were targeted for substantial reduction, could not be brought down. Billing and collection efficiency under the privatised distribution companies were (DISTCOs) far from improving, actually worsened and theft of electricity continued unabated.

6. The reform scheme was further vitiated by sharp, upvaluation of assets at the time of transfer to the utilities. This led to a steep increase in the cost of power. Unrealistic assumptions that GRIDCO would become profit-earning from 1999/98 led to the abrupt withdrawal of the subsidy by the state government from 1996/97. There has been considerable increase in the average tariff at a cumulative rate of 15.5% annually over the last 9 years without any perceptible improvement in customer service. The cross subsidy has also been brought down, particularly in the post-reform period, thereby casting a heavier burden on domestic consumers.

7. Unabated increase in tariffs without a perceptible reduction in techno-commercial losses or improvement in customer service has led to growing public discontent against reform. This situation has worsened because of spiralling increase in costs and the deteriorating health of the utilities. The DISTCOs and GRIDCO have been rendered utterly unviable as a result of their inability to reduce T&D losses, control rampant misuse and theft of electricity and contain costs. DISTCOs are unable to pay salaries to their employees without defaulting on payment to GRIDCO towards purchase of

power. GRIDCO also is unable to recover costs and is incurring heavy debts to finance losses year after year. In this situation, the generating companies are also facing problems of inadequate cash realization. The situation has become so critical that the private sector partner in one of the DISTCOs, AES, has abandoned the management of CESCO which is now being managed by a CEO appointed by the Regulatory Authority. We recommend that the CEO attends to CESCO the whole time.

8 The key to the revival of the sector lies in improving efficiency and bringing down costs. By efficiency improvement not only can customer services be geared up but T&D losses, currently at an unacceptably high level, can be brought down substantially. The reform scheme sought to address the problem of T&D losses through (a) capital investment to strengthen the transmission and distribution system so as to reduce technical losses, and (b) privatization of distribution to bring in better management skills and practices for enforcement of accountability to reduce commercial loss. Neither of these has succeeded so far.

9 Large capital investments have been made but not a single project has been completed despite considerable time overruns. The delays in most cases for want of forest clearance, land availability or right of way. Since none of the projects has been commissioned, no benefit has been realized from the investments worth more than 600 crore rupees out of funds borrowed from the World Bank carrying heavy debt servicing liabilities. Efforts need to be intensified to complete and commission the on-going works. No new work should be contracted until the majority of the on-going works is completed. With the commissioning of these works, there should be a significant improvement in system reliability and reduction of technical losses which would benefit impact on cost reduction.

10 As far as the massive commercial losses are concerned, the results achieved over the last five years are insignificant. T&D losses which were 46.94% in 1995/96 as shown by the Audit are now 46.63% as reported by the utilities themselves. The loss is even more staggering in the LT segment at 68%. The DISTCOs, in their projections, have proposed very little loss reduction. The rate of loss reduction that needs to be attempted and achieved in the next five years must not be less than an average of 5% which, in our view, is well within reach. Attainment of the goal would, however, call for determined, comprehensive, and relentless effort. The following are some suggestions in this regard.

A concerted drive to remove illegal connections (such as hooking) and effective measures to convert them into regular connections followed up by systematic billing and collection of energy charges. Should the DISTCOs wish police escort for carrying out special drives to prevent unauthorised use of electricity, over and above the comfort of the Chief Secretary's circular to DMs and SPs asking for prompt intervention in the event of violence by anti-social elements, the Government should make available to the companies the requisite support on payment of costs. 100% consumer metering within a year and immediate metering at the low voltage terminals of step down transformers should be provided so that supplies into HT & LT systems can be quantified for purpose of proper energy accounting which is practically missing.

13 A major cause of sharp increase in the cost of power was steep revaluation of assets at the time of transfer to GRIDCO. It called for substantially higher provision for depreciation as well as return on capital. Neither of these could be met because of a shortfall in revenue. In these circumstances it would be worthwhile keeping the revaluation in abeyance till the system is brought to balance. In fact there is a case for setting aside the revaluation of OHPC which is expected to be profitable in the years to come. In addition to this, the state government may agree to allow a moratorium on debt servicing to the state except the amounts in respect of loans from the World Bank which the state government would need to pay to the Centre. After applying these correctives and also taking credit for T&D loss reduction at an average rate of 5% per year, the revenue gap at the existing retail tariff would show a decline but would still be substantial. The unavoidable revenue gaps would need to be financed from sources other than debt. Since the state government themselves are passing through severe financial stress, it may not be realistic to ask them to make a sacrifice over and above what has been suggested already.

12 An exercise has been carried out to estimate the annual shortfall on a cash-flow basis without a efficiency tariff hike but assuming that of the DISTCOs collection would progressively improve from the present level of 76% to reach 95% by the year 2005/06 instead of ending up with a collection efficiency of 84% proposed by them. With a tariff hike of 18% in 2005 the entire cash deficit would disappear and the year 2005/06 would witness both an operational profit as well as a marginal cash surplus. The sector as a whole would turn around in 2005/06. The consumers could be called upon to pay higher tariffs at that stage because by then the utilities are expected to have shown evidence of their concern for and efficiency in T&D loss reduction and improvement of customer service; not otherwise.

13 To bring the reforms back on the rails, the World Bank and the DFID who helped Orissa initially, and hopefully have retained their interest in the reform, should come forward with a suitable package to fill the revenue gap in the intervening years. Without this interim financing (estimated at 3240 crore rupees) there seems hardly any prospect of the reform coming to fruition. The government of India should not only persuade them to do so but also extend a helping hand in sharing the responsibility of interim financing of the revenue gap.

14 Once a decision is taken on interim financing and its apportionment, the Distcos and GRIDCO may be pinned down to specific performance parameters by desegregating the proposed T&D loss reduction DISTCO-wise.

15 In the prevailing run-down state of GRIDCO and DISTCOS, no durable rehabilitation is possible without interim financing of unavoidable losses. However, it needs to be emphasized that no amount of support from outside would succeed unless the utilities conduct themselves with greater sense of responsibility. Privatization was seen as a means to improve the performance of the DISTCOs. The private sector partners need to bear in mind their crucial role which can not be performed satisfactorily unless they face the tasks as a challenge and an opportunity and take the industry forward in the true spirit of partnership for mutual benefit.

16 The private promoters of the DISTCOs neither brought superior management skills nor did they arrange financial support even by way of working capital for the companies which were in dire need of capital, working capital in particular. Instead of using the good offices of BSES to secure working capital in terms of Clause 8.1 of the Shareholders Agreement for the three DISTCOs under their management, the DISTCOs have persistently defaulted in payment to GRIDCO towards purchase of power. The outstanding overdues of GRIDCO as on 30 September 2001 against these three DISTCOs is 680.72 crore rupees including bonds issued by them in lieu of cash payments. So far as the other distribution company CESCO is concerned, the situation is worse. AES, the private sector partner never fulfilled its commitment to bring working capital. They were allowed to pile up unpaid power purchase bills amounting to 403 crore rupees by time they walked away in August 2001. Now that AES have abandoned CESCO, GRIDCO seems to be left with hardly any other option except exploring a legal remedy. As far as BSES-managed DISTCOs are concerned, the attitude of deliberate default in payment to GRIDCO must end. BSES should make all efforts to bring in working capital in terms of the Shareholders Agreement.

17 The system of escrow put in place to secure regular payments to GRIDCO towards power purchase has not worked. With the package of financial relief recommended by us along with enforcement of the provisions of the Shareholders Agreement, the escrow mechanism should be made to work and strictly enforced.

18 There is an urgent need to develop trust and goodwill between the employees and the management. The vital role of the employees and their associations in building up the industry needs to be taken more seriously. While firm action against known miscreants is necessary to enforce discipline and accountability this can not be done without skillful handling of situations and willingness to mitigate genuine grievances. A specific matter in this connection relates to pensionary benefits. Employees apparently have found that the pension scheme preferred by them, and also adopted by the companies, has turned out to be disadvantageous, particularly for those who came over from the government in a higher age group. In a matter like this neither the present employers nor the government should take any rigid stand. The effort should be to find a solution which may not even be difficult to reach. Likewise, there is an apprehension that the liabilities of Government/GRIDCO towards the Pension Trust may not have been assessed correctly. This is a matter of actuarial calculation, which may affect the viability of the Pension Funds, so there should be no reluctance to take a fresh look at the estimates.

19 Orissa is richly endowed with natural resources, and now has the additional advantage of surplus power. This combination needs to be exploited to accelerate industrialization of the state through vigorous marketing of power by offering more competitive rates. By selling surplus power to industries, even at tariffs lower than prescribed by the OERC, not only would the state benefit from industrialization, but the DISTCOs themselves would also stand to gain as long as they recovered costs at the margin. The tariffs fixed by OERC should be treated as the ceiling in each category, and utilities should have the freedom to supply power at lower rates in exercise of their commercial judgement.

20 With restructuring and privatization, there is a much greater need now for rigorous enforcement of safety norms in the electricity industry. However, care needs to be taken to see that there is no mindless expansion of the Electrical Inspectorate. Services of chartered engineers, under a strict system of empanelment and penalty in the event of misconduct, may be utilized for the purpose of supplementing human resources of a slim, well-structured Inspectorate.

21 The services of local consultants as well as highly-rated consulting firms of international repute were used extensively in the preparation of the blueprint of reform, and to assist the utilities in developing internal systems of operation management, financial control, technical services, contract management, project implementation etc. The cost incurred so far is a staggering 306 crore rupees. However, judging by the fate of the reforms and the state of the utilities it is clear that the utilities, for whose benefit the consultants were engaged, did not assimilate much of their advice. Instead of developing an inner strength with the assistance of consultants, they tended to be excessively dependent on them leading to a near-atrophy of organizational strength. We suggest that this practice which weakens organizations rather than strengthening them and demotivates employees instead of improving their skill and confidence, should end as soon as possible.

22 Close attention should be given to strengthening the managerial competence of GRIDCO which is not only financially sick but also organizationally very weak. The following recommendations are made in this connection.

- The senior management of GRIDCO should be selected on the basis of merit and appointed for a fixed term of 3/5 years.
- The State Load Dispatch Center (SLDC) and its commercial counterpart the energy-billing centre should be provided with the necessary staff whose skills should be substantially honed and upgraded by regular training.
- GRIDCO's Project Management Unit (PMU) should take over the responsibility of all capital works irrespective of the source of funding. It should also monitor capital works executed by the distribution companies in addition to managing and monitoring GRIDCO's own works.

23 The entire power sector needs top management of a high calibre just as it requires an efficient workforce motivated to further the interest of the industry. The task before the management is daunting. Appointments to the Boards of Directors of all the utilities need to be reviewed to ensure that professionals including administrators with competence, vision, and commitment may enrich the utilities at the top. The prevailing system of part time appointments to key positions in the sector, including the Chief Executive Officer of OHPC should end. The Chief Executive Officers of the DISTCOs should be stationed at their respective headquarters.

24 The Committee did not get evidence of any innovative practice introduced in the management of the privatized DISTCOs. However, in some of the DISTCO areas, an experiment is in progress to involve village communities in streamlining power supply in rural areas. While the results seem to be encouraging, the exercise currently being conducted by consultants can succeed in the long run and over large areas only if the programme is implemented by DISTCO officials themselves.

25 It is recognized that Regulatory Commissions need to lay down norms for tariff determination which would enable the utilities to have a clear idea of the range in which tariffs may move over a reasonable period. A multi-year tariff regime is therefore being advocated by experts. The OERC has also laid down norms in certain areas though much more needs to be done. But no purposeful result can be achieved in the matter of multi-year tariffs unless there is a reasonable financial balance. Serious efforts are required to provide financial balance to the sector before multi-year tariffs can become a reality.

26 Another idea often advocated by experts is multi-buyer model of power trading. Here again, attainment of financial balance is an essential pre-requisite to provide a basis for competition through various models of multi-buyer systems as distinct from the single-buyer model adopted by Orissa as well as other states which have embarked on reforms. In the prevailing situation of GRIDCO's near-bankruptcy and disarray in the functioning of DISTCOs, the sector should be spared any further trauma. Meanwhile, GRIDCO needs to strengthen itself to develop the ability and skill to handle the power trading function, which calls for, among other things, prompt exercise of commercial judgement. Urgent attention should be paid to develop this within the organization. It would be of advantage to develop within GRIDCO a well-functioning trading unit which may eventually be turned into an independent trading organization as a step towards bringing in a competitive regime that would provide the consumer the opportunity to choose the source of his power supply.

27 Rural electrification seems to have unintentionally, become the worst casualty of the reform process. With the restructuring of OSEB, and privatization of DISTCOs, the rural electrification wing of OSEB was disbanded and it was left to the DISTCOs to carry on with schemes that were in the pipeline. Since the activity is not attractive commercially, the DISTCOs cannot be expected to be very enthusiastic about rural electrification. The interest of DISTCOs has further slackened because even the modest rural electrification work done by them has not been paid for inspite of the fact that an amount of 23 crore rupees of capital subsidy due was certified by the OERC several months ago. No fresh scheme of rural electrification seems to have been proposed for funding support of agencies like REC, nor any scheme drawn up for the purpose. Another regrettable feature is the utter lack of concern for the productive use of electricity in rural development through agriculture pumping. In terms of agricultural demand for power among states, Orissa is practically at the bottom. What is worse is that agricultural demand for power in the state has gone down from a meagre 6% in 1992/93 to a dismal 3% in 1999/00, compared with the national average of 30%. No single department of the state government is entrusted with the administrative responsibility to plan, promote, and monitor growth and press for rural electrification for the development of irrigation pumping which is vital for rural development. Under a high priority national plan, all villages are required to be electrified by March 2007. For a state like Orissa, with 40% of the population from weaker sections of scheduled castes and scheduled tribes living in remote areas, the headway to be made is large. The Kutir-Jyoti programme needs to be pursued with vigour. It must however be ensured that the benefits of the subsidized electricity supply under this programme flow to the targeted beneficiaries. The goal is unlikely to be reached unless determined efforts are made and effective machinery is put in place for planning, execution, and monitoring rural electrification projects. The vacuum caused by abolition of the

rural electrification wing of the OSEB needs to be filled up and an alternative system created. The following recommendations are made in this connection.

- A Rural Electrification Planning Organization (REPO) should be set up under the government to provide focus and direction to this vital programme, to prepare specific schemes, pose them to funding agencies and over-see utilization of the funds procured.
- REPO should have under it four Rural Electrification Planning Units (REPU), each corresponding to a DISTCO with which it would need to work in close coordination. These units would draw up, detailed schemes of rural electrification.
- Prioritization of villages for electrification should be done by REPUs in consultation with the Collector of the concerned district.
- Execution of the works would be the responsibility of the concerned DISTCOs.
- REPUs would need to monitor the execution and report completion of schemes and the expenditure incurred thereon to the Collector of the district and the state REPO.
- On the basis of the Collectors' certificates of satisfactory completion, the state government should promptly settle subsidy payments admissible to DISTCOs.
- Government would need to provide DISTCOs with a capital subsidy; revenue requirements would, in normal course, be considered by OERC as a part of the tariff exercise.

28 Our recommendations would help rehabilitate the utilities, bring stability, and promote growth of the power sector only if they are implemented as a package and their implementation is managed and monitored closely. The reforms adopted by Orissa may have been flawed, but mid-course corrections could have been successfully applied much earlier, and at less cost to the economy, had the reforms been managed approximately. The Committee's recommendations for putting the reform back on the rails would succeed only if the need for reform management is recognized and a system is put in place by the government. for regular monitoring, coordination and mid-course correction. It is interesting to know that of all the major parameters of reform laid down in the SAR, one of the few that proved realistic was tariffs. Retail tariffs have been fairly close to the SAR assumption in the first two years and substantially higher since 1998/99. Thus, consumers have not failed to provide support; they have made ample sacrifices for a of better quality of service, which has eluded them so far.

29 Power sector reforms would succeed if the utilities bring in efficiency, cut costs, reduce losses, and ensure greater consumer satisfaction. It would also require strong enforcement to ensure that consumers of electricity pay for its use. All sections of society, particularly those, in a position to influence public opinion, have the responsibility to provide the requisite support. Revival of the power sector would depend to a large extent on how fast a consensus is built in this vital area.

30 The state's power sector is now on the brink of a crisis. It is high time all agencies: the state government, the central government, the World Bank and the DFID, got together and took a holistic view of what can be done by each to rescue the reforms. If electricity reform fails in Orissa, it would have an adverse impact on reforms all over the country. What has taken place in the electricity industry of Orissa is only restructuring, privatization and

establishment of a Regulatory Commission. The real reform, which brings in its wake benefits to consumers, strength to the industry, and growth for the economy has yet to come.

